#### DOCUMENT RESUME

SE 021 292 ED 137 059

TITLE Resource Guide to Environmental Education in

Colorado.

Colorado State Facilitator Project, Longmont. INSTITUTION SPONS AGENCY

Bureau of Elementary and Secondary Education

(DHEW/OE), Washington, D.C.

PUB DATE Jul 74

NOTE 224p.: Contains occasional light and broken type

MF-\$0.83 HC-\$11.37 Plus Postage. EDRS PRICE

\*Directories; Educational Programs; Elementary DESCRIPTORS

> Education; \*Environmental Education; Post Secondary Education; \*Program Descriptions; \*Resource Guides;

\*School Districts: Secondary Education; \*State

Surveys

\*Colorado: Elementary Secondary Education Act Title **IDENTIFIERS** 

III: ESEA Title III

#### ABSTRACT

This resource quide to Colorado environmental education programs offers information on environmental programs currently in operation and services available to Colorado educators in environmental/conservation education. Information is provided on five programs that have been validated for national dissemination by the United States Office of Education. Forty-four elementary and secondary school environmental education programs in Colorado are described in two-page formats which include: title and location, grade level, objectives, narrative, evaluation, availability of materials, and special requirements. A listing of agencies and organizations in Colorado that provide educational resource material is provided. A detailed list of post-secondary institutions in Colorado and the resources they can provide is given. These resources include: courses, special programs or services, resource people, availability of materials, and costs. A listing of state environmental education resources conclude this quide. (BT)

Documents acquired by ERIC include many informal unpublished \* materials not available from other sources. ERIC makes every effort \* \* to obtain the best copy available. Nevertheless, items of marginal \* reproducibility are often encountered and this affects the quality \* of the microfiche and hardcopy reproductions ERIC makes available \* via the ERIC Document Reproduction Service (EDRS). EDRS is not \* responsible for the quality of the original document. Reproductions \* \* supplied by EDRS are the best that can be made from the original. \*

\*



preparing other publications.	
I acquired the Resource Guide to Environmental Education through	
Content and <u>Guide</u> format:	
Included a good variety of environmental programs and resources	
Tended to be too limited in scope	
Tended to be too broad in scope	
The abstracts provided enough general information	
The abstracts did not include enough general information to be useful	
Other comments:	
Please check the uses you have made of the <u>Guide</u> :	
Used ideas or components of the program abstracts	
Requested additional information on specific programs from the State Facilitator	
Shared the information with people in my district or organization	
Contacted program staff to arrange visits or for discussion	
Planned to implement programs or components locally	
Contacted resources listed other than district/school programs	
Other:	
NameDistrict/Organization	



First Class Permit No. 69 Longmont, Colorado

#### BUSINESS REPLY MAIL

No postage stamp necessary if mailed in the United States. Postage will be paid by:

COLORADO STATE FACILITATOR PROJECT 830 South Lincoln Longmont, Colorado 80501



#### **ACKNOWLEDGEMENTS**

This publication is the result of co-operative efforts between the Colorado State Facilitator Project, the Colorado Department of Education, the Colorado Division of Wildlife, and the contributing school districts, agencies and organizations.

Special thanks are due to George Ek, Conservation Education Specialist, Colorado Department of Education and Dr. Richard S. Casebeer, Co-ordinator of Environmental Education, Northern Colorado BOCS. Russ Bromby of the Colorado Division of Wildlife prepared the art work. The publication could not have been brought to culmination without the co-ordinative assistance of Ann Disborough, Colorado State Facilitator Project, and Chris Wasmuth and Nell Byers of the Colorado Department of Education.



#### COLORADO STATE FACILITATOR PROJECT

The Colorado State Facilitator Project was funded in July, 1974, from Section 306 of ESEA Title III.

The purpose of the Facilitator Project is to promote the sharing of proven educational practices in Colorado. Exemplary program resources are available to the Facilitator Project from all over the United States. The programs have been validated as cost-effective by a rigid evaluation process developed through the U.S. Office of Education. These programs are available to any public or private school in Colorado.

The Colorado State Facilitator Project is also involved in sharing information on programs in Colorado. This publication is an attempt to disseminate information gathered on environmental programs currently in operation and services available to Colorado educators in environmental/conservation education.

The memebers of the Colorado State Facilitator Project staff are Duane Webb, Director; William Davis, Field Co-ordinator; Jeannette Wilson and Wilma Jones, Field Staff.

For further information, write to the Project at 830 South Lincoln, Longmont, Colorado 80501 or call 772-4420 (Longmont); 442-2197 (Denver-Boulder).



Each entry in the Resource Guide to Environmental Education has been edited, but no claim is implied that the information is complete. Corrections, additions and revisions are solicited. Revisions of the Guide will depend upon availability of funds and evidence of the Guide's value to the user; therefore, the enclosed sheet requesting feedback on how the Guide led to the improvement of instruction benefiting Colorado's school population will be especially helpful.

Many schools, agencies and organizations that contribute to environmental education have not been included, either by their own choice or because information was not submitted. Where omissions are obvious to the user, we ask that information be forwarded for consideration for inclusion in reprints or revisions. Send additions or corrections to:

George Ek Conservation Programs Development and Demonstration Unit Colorado Department of Education State Office Building Denver, Colorado 802C3 892-3382

The Conservation Directory contains specific references to on-going environmental conservation activities that are not included within this Resource Guide. For help in identification of those national and international organizations that provide services available to Colorado, consult:

The Conservation Directory
The National Wildlife Federation
1412 Sixteenth Street, N.W.
Washington, D.C. 20036
202-483-1550



## ENVIRONMENTAL EDUCATION IN COLORADO'S SECONDARY SCHOOLS: A STATUS REPORT

In June, 1975 Charles A. Bottinelli completed a study of secondary environmental education in Colorado as a Master's Thesis for the School of Education, University of Colorado, Boulder. A summary of the study, "Summary of a Survey of Secondary Environmental Education in Colorado" is available at no cost upon request from the School of Education.

In March, 1975 a twenty-three item questionnaire, designed to determine the status of secondary environmental education in Colorado school districts, was sent to 51 districts selected by a stratified ramdom sampling technique. A computer program secured descriptive statistics on each of the 139 variables, made two crosstabulations, and computed Spearman's r (for pairs of environmental education objectives) for the entire state and the four geographical regions (Eastern Plains, Front Range Strip, Central Mountains, and Western Slope).

The study compares selected Colorado findings with the results of a 1969-70 NEA survey of 700 school systems throughout the nation, as well as examining kinds of environmental education programs offered in the state, program objectives, program content, classroom environmental education strategy, school district, program funding, school district needs, and many other aspects of environmental education in Colorado.

Slightly over one-half of all Colorado school districts include some form of environmental education in their secondary curricula, with nearly three out of four Front Range districts leading the other three regions. Only 37% of the secondary students in programmed districts were exposed to some form of environmental education during the 1974-75 Colorado school year.

The study concludes that Colorado's secondary schools must not only increase the number of environmental education programs offered, but must also drastically increase emphasis on content areas related specifically to the population-food crisis, nuclear waste disposal, oceanic exploitation, and environmental careers, as well as topics of special relevance to Colorado's environmental future.



### TABLE OF CONTENTS

Environmental Education in Colorado's Secondary Schools: A Status Report	. 1
U.S.O.E. Dissemination Review Panel-validated programs in Environmental Education Project ECOS - 2 Project Adventure - 4 Knowledgeable Action to Restore our Environment (KARE) - 6 Project I.C.E. (Instruction-Curriculum-Environment) - 8 Environmental Education Demonstration Project - 10	. 2:11
Colorado School District and Non-Public School Programs	12-99
Academy 20 - Sophomore Experiential Educative Program	12
Bethlehem Lutheran School - Lutheran Resident Outdoor Education	14
Boulder Valley Institute - Mountaineering	16
Soulder Valley Institute - Desert Trip	18
Cherry Creek 5 - Pingree Park	20
Cheyenne Mountain 12 - STOP (Students to Obliterate Pollution)	22
Colorado Springs 11 - Sixth-Grade High Trails Resident Outdoor Learnin : Experiences	24
Delta County 50J - The Cultural Relationship of Man to his Environment	26
Delta County 50J - How to Survive with Coal on Your Doorstep	28
Denver R-1 - Environmental Education Teacher In-Service	30
Denver R-1 - Environmental Volunteers	32
Denver R-1 - Environmental Education (8-9)	34
Denver R-1 - Balarat Eco-Seminar	36
Denver R-1 - One-Day Balarat Excursions	38
East Grand 2 - Alternative Education - Outdoor	40
Harrison 2 - District-Wide Interdisciplinary Outdoor Education Program	42
Holy Cross Abbey, Order of Benedictines - Rocky Mountain Ecology	44
<u> Jefferson County R-1</u> - Biological Sciences Curriculum Stúdy Workshop	46
<u> Jefferson County R-1</u> - Earl Johnson School Site Carriculum Development	48
<u> Jefferson County R-1</u> - Elementary Science Revision	50
<u> Jefferson County R-1</u> - Energy Conservation	52
<u> Jefferson County R-1</u> - Environmental Community Resource Person	54
<u> Jefferson County R-1</u> - Environmental Living	56
J <u>efferson County R-1</u> - Escalantee Canyon Eco-Trek	58
Jefferson County R-1 - Extended Outdoor Education Experience (Ski Touriry)	60
<u> Jefferson County R-1</u> - Float Trips	62
<u> Jefferson County R-1</u> - Forest Service Workshops	64
<u> Jefferson County R-1</u> - Environmental Community Studies Program	66
<u> Jefferson County R-1</u> - Environmental Studies Day Camp	68
<u> Jefferson County R-1</u> - Operation Sundance	70
Jefferson County R-1 - Resource Center	72



Jefferson County R-1 - Teacher Mini-Courses	
Park R-3 - Mountain Emergency, Rescue and Survival Training	
Platte Canyon Re 1 - Environmental Education Experience	
Platte Canyon Re 1 - Snowbound	
Poudré R-1 - Nature Center	
Poudre R-1 - Resident Camp	
St. Vrain Valley Reld - Environmental Discovery School II	
Steamboat Springs Re 2 - Outdoor Educational Experience	
University of Northern Colorado Lab School - Man and His Environment 90	
Westminster 50 - Resident Outdoor Education Program	
Westminster 50 - Multi-Media Multi-Disciplinary Resource Center (Education for Survival) 94	
Widefield 3 - Summer Youth Environmental Program (SYEP)	
Colorado Outdoor Education Center	
tiv.	
Educational Resources Available from Organizations in Colorado 100-1	53
Adolph Coors Company	0
American Forest Institute	2
Cheyenne Mountain Zoo	4
Colorado Association of Soil Conservation Districts	6
Colorado Open Space Council	8
Colorado Open Space Council Wilderness Workshop	0
Colorado OUTWARD BOUND School	2
Colorado Water Congress	4
Conservation Library, Denver Public Library	6
Denver Zoological Gardens	8
ERIC (Educational Resources Information Analysis Clearinghouse for Science, Mathematics 12 and Environmental Education	0
ERIC (Educational Resources Information Clearinghouse for Social Studies and Social 12 Sciences	2
Environmental Action of Colorado, Inc	4
Jefferson County Conference and Nature Center (Breeden House)	6
Keep Colorado Beautiful, Inc	8
National Audubon Society Mobile Environmental Education Project	0
National Recreation and Park Association	2
The Nature Conservancy · · · · · · · · · · · · · · · · · · ·	4
Safari Club International Conservation Fund	6
Thorne Ecological Institute	8
·	40
	12



United Brawers Association
University of the Wilderness
University of the Wilderness
Western Regional Environmental Eddeation Soundil
the wilderness society
Youth and Wild Truth
15/ <sub>2</sub> -199
Educational Resources Available from Agencies in Colorado
Bureau of Land Management
Bureau of Outdoor Recreation, US Department of the Interior
Bureau of Reclamation, US Department of the Interior
Colorado Department of Education; Colorado Division of Wildlife 160
Colorado Department of Health
Colorado Division of Highways, Staff Environmental Division
Colorado Division of Parks and Outdoor Recreation
Colorado Geological Survey
Colorado State Forest Service
Colorado State Library
Colorado State University Co-operative Extension Services
Denver Museum of Natural History
Denver Water Department
Environmental Protection Agency, Region VIII
Fish and Wildlife Service
Forest Service, US Department of Agriculture
Interstate Energy Conservation Leadership Project
National Center for Atmospheric Research
National Oceanic and Atmospheric Administration, US Department of Commerce 190
National Park Service
Reclamation Section, Department of Natural Resources
San Juan BOCS - Raft Trips
Soil Conservation Service
Institutions of Higher Education
Colorado State University College of Forestry and Natural Resources
Colorado State University Co-operative Extension Service
Colorado State University, Department of Fishery and Wildlife Biology
University of Northern Colorado
List of institutions of higher education with environmental courses
APPENDIX
APPENDIX



# 306 - Colorado State Facililator Project

#### Validated for national dissemination by USOE

PROGRAM TITLE

ECOS (Environmental Education Community Opportunity for Stewardship)

LOCATION

Yorktown Heights, New York

grade level

K-12

who is involved This Title III program was developed and is administered through a Board of Co-operative Educational Services in Northern Westchester and Putnam counties, New York. Over 6,000 of the area's students and over 200 teachers have been involved. Students are from public and non-public schools in rural, suburban and urban areas.

objectives

- To assist schools in re-structuring to create experiential programs capable of responding to the multi-faceted dimensions of environmental education programs.
- 2. To use the schools and the community to research and monitor environmental problems.

narrative

The program has developed flexible curriculum units which may be used in self-contained or open classrooms. Some are as short as a week while others run through the year. Teachers of science, math, social studies, literature, art and other areas have been participants in the program. The community has been involved in a variety of roles, including that of action task force. Meetings and seminars are also held. A teachertraining institute on a number of topics is held throughout the year. The topics vary in length, site and complexity. Each district can select and adapt ECOS components or parts of components to its own needs after consultation with the Institute.

Five workshop programs are available at present:

Dynamics of Change Environmental Monitoring K-12 Curriculum Development Career Education (using Environmental Education models) Community/School Co-operation



evaluation

Contact the Co prado State Facilitator Project.

availability of materials Materials available include the following, plus additional, titles:

Sense Awareness through Environment
Environmental Studies
Exploring for Action

special requirements

In-service time for staff; time to develop and modify materials for local needs; planning time.



## 306 - Colorado State Facilitator Project

#### Validated for nacional dissemination by USOE

PROGRAM TITLE Project Adventure

LOCATION

Hamilton, Massachusetts

grade level

7-12

who is involved

Over 5,000 students representing all academic and economic levels in several semi-rural and urban districts have been involved. The primary focus of the program has been on grades 10 and 11, but use of the approach has been broadened considerably in both directions.

objectives

- 1. To increase the participant's sense of personal confidence.
- 2. To develop an increased familiarity and identification with the natural world.
- 3. To increase mutual support within a group.
- 4. To develop an increased joy in one's physical self and in being with others.
- 5. To develop an increased level of agility and physical co-ordination.

narrative

The program is an attempt to translate Outward Bound concepts into a school setting. The approach has focused on developing a curriculum that is action-based and enjoyable. A major thrust has been in Physical Education through the ropes course and other Outward Bound approaches; however, the Adventure Curriculum can be applied to Biology, Art, Social Studies or other disciplines.

The Environmental Education component is based on the process of students working on specific reality-based problems. The attempt is to actively involve students in a demanding situation which usually requires co-operative effort. These may take place in a non-school setting or culminate in a field trip.





#### evaluation

Evaluation of the Project indicates a significant impact on student self-concepts; for example, an increased willingness to take resks and a decrease in overall passivity are demonstrated. Contact the Colorado State Facilitator Project for additional information.

availability of materials Materials range from The Texture Walk: An Outdoor Experience in Creativity to Acadia: A Working Manual to The Seacoast as Teacher. For a complete listing and prices, contact the Colorado State Facilitator Project.

special requirements

A workshop/training period for involved staff and a period of time for the development of locally-applicable curriculum units.



## 306 - Colorado Itate Facililator Project

#### Validated for national dissemination by USOE

PROGRAM TITLE : Knowledgeable Action to Restore our Environment (KARE)

LOCATION

Blue Bell, Pennsylvania

grade level

K-12

who is involved

The target population for the program exceeds one million students in urban, suburban and rural areas in Southeast Pennsylvania, belonging to all socio-economic levels. In the past four years over 55,000 students have been closely involved with LAP's (see below).

objectives

- 1. To achieve effective awareness of environmental problems and methods of restoring the environment.
- 2. To invo · students in planning and conducting activities.
- 3. To enable students to experience urban-suburban-rural co-operation in environmental problem-solving.
- 4. To utilize action-oriented and interdisciplinary learning approaches.
- 5. To identify and make use of local resources for environmental education.
- 6. To €ster on-going community involvement.

narrative

Not all objectives apply equally to all components. The overall view is that curricular revision is most effective if pursued in small incremental changes that originate with the school/system, deal with real environmental problems, and are supported by the KARE staff.

There are five activity components:

LAP's (Local Action Programs) - these are selected from detailed proposals submitted by school districts that are based on local concerns, suggest interdisciplinary activities, and identify co-operative learning activities.

Special Projects - these are similar to the LAP's but are not as highly structured.

Environmental Education Resource Center - this contains various appropriate resources for both the Project staff and the students, teachers and community at large.

Curriculum Materials Development - primarily curriculum activities guides and environmental studies films.

Environmental Studies Consultant Services - these site analyses vary depending upon the location and needs.



#### evaluation

Relatively extensive evaluation has been done using a variety of instruments thought to be appropriate. Generally, a positive growth has been determined. For more complete evaluation information, contact the Colorado State Facilitator Project.

availability of materials The materials available for other schools are five curricular guides and two films. The guides are:

Solid Waste and Environmental Studies

Population and Environmental Studies

Water Quality Equipment

In-Depth Environmental Studies

<u>Selected Environmental Topics for Use with Elementary and Junior High Students</u>

The films are <u>Urban Studies</u>: <u>Two Ways</u> and <u>Environmental Studies</u> - The KARE Approach.

special requirements

Would depend upon the component or activity desired.



# 306 - Colorado State Facilitator Project

#### Validated for national dissemination by USOE

PROGRAM TITLE

Project I.C.E. (Instruction-Curricy)um-Environment)

LOCATION

Green Bay, Wisconsin

grade level

K-12

who is involved

The Project serves 165,000 students in Northeastern Wisconsin. Districts range from urban to rural in character and represent an economically and culturally diverse area.

objectives

- To develop a K-12 Environmental Education program.
- To involve staff with in-service activities, resource centers and community resources.
- To show greater student gain on the Environmental Cognitive Control test than a control group.
- To share experiences and skills with related and interested audiences.
- To develop a strong thrust toward community involvement and support.

narrative

The program has developed a series of curriculum guides for most subjects in grades K-12, based on twelve environmental concepts. The guides contain a series of mini-lessons which identify the major concept, list an environmental problem orientation, suggested behavioral objectives, inclass activities, available appropriate materials, and several other items. These guides were written by 235 teacher-writers during the developmental phase and then classroom-piloted before being included in the program.



evaluation

The I.C.E. concepts test of control and experimental groups shows that all grade levels tested scored better on the post-test and all experimental groups scored significantly better than did the control groups.

availability of materials The Project has prepared the following materials:

- 1. 39 curriculum guides
- 2. 29 field activity guides
- 3. 4 slide/tape presentations
- 4. 17 slide programs on environmental topics
- 5. A media catalogue
- 6. Cognitive and affective environmental evaluation instruments
- 7. An Implementation Strategy Handbook

Please contact the Colorado State Facilitator Project for information on availability.

special requirements

No special facilities or equipment are needed. A district staff member should be designated to be in charge of the materials and/or co-ordination. The precise requirements would depend on the activity involved.



## 306 - Colorado State Facililator Project

#### Validated for national dissemination by USOE

PROGRAM TITLE . Environmental Education Demonstration Project

LOCATION

Topeka, Kansas

grade level

K-12, with particular emphasis on Special Education classes

who is involved

U.S.D. 501 in Topeka and the Capper Foundation for Crippled Children Over 9,000 students have been involved in the program in three years; over 97% participated on a voluntary basis.

objectives

The program seeks to create in students an emotional and intellectual appreciation of man's role within his environment. Broad topics identified as central were increased population, pollution, and the balance of nature. Specific objectives were:

- 1. To create appropriate units including objectives, student activities, teacher suggestions, resources and appropriate field experiences.
- 2. To pilot, revise and evaluate the curricula.

narrative

There are five components to the original model:

Training
Curriculum Development
Instruction
Community Involvement
Dissemination

Stress in dissemination has been placed on the model and on the materials developed. The amount of time spent by teachers depends upon the activities selected, the degree of use of optional activities, and the time needed for classroom instruction. Field trips are part of the program.



#### evaluation

Evaluation procedures focused on the development of instruments and evaluation of the program. Available data indicates significant positive effects. More detailed information can be obtained from the Colorado State Facilitator Project.

availability of materials Ten Special Education units, including <u>Water Pollution</u>, <u>Insects and Spiders</u>, and <u>The Balance of Nature</u>.

Six Elementary units, including Plants and Energy.

A total of eight secondary modules, including <u>Nutrition and the Growing Population</u> and <u>Life - Past</u>, <u>Present and Future</u> have been developed.

Contact the Colorado State Facilitator Project for information on availability.

special requirements

Dependent upon the activities selected. A trained person to present information to teachers at in-service meetings; community support; perhaps volunteers to accompany students on field trips and to spend time in the classroom would all probably be necessary.

21



11

## 306 - Colorado Itale Facilitator Project

school district

Academy 20

program title Sophomore Experiential Educative Program

grade level

10

who is involved

Forty tenth-grade boys and girls

objectives

- To improve student self-concept.
- To improve school attendance.
- 3. To improve student reading levels.
- 4. To improve student attitudes toward school.
- 5. To improve student-teacher relationships.
- To improve overall academic achievement of participating students.
- 7. To increase student participation in school activities.
- To help students develop a sense of responsibility.

narrative

The general purpose of the program is to provide an alternative education program by experiential learning activities, extensive use of community resources, learning by doing, and use of the outdoor environment (three-day outdoor trips emphasizing Outward Bound-related activities and a physical education ropes course). The outdoor environment provides challenges and opportunities for co-operation, decision-making and partici, tion in activities that foster individual growth, self-confidence and success. The overall program includes student input, stresses success and positive feedback, and emphasizes the affective side of learning as much as the cognitive side.

The following pre- and post-tests are given:

- School Climate Survey (student test)
- Learner Self-Concept Survey (student test)
- Nelson Reading Test (student test)
- Student Descriptive Form (teacher evaluation)
- 5. Comparison of attendance and course grades at beginning and end of school year.

evaluation

(continued)

12



### evailability of

materials

#### **EVALUATION** (continued)

Parents complete questionnaires about their child's growth and development during the school year. Students complete evaluations of units and of three-day trips.

Contact the Colorado State Facilitator Project concerning availability of materials.

#### special require ments

Three-day trips require camping equipment and transportation to and from the site. The ropes course equipment was obtained through the adoption in Academy 20 of a USOE Dissemination Review Panel-validated project (contact the Colorado State Facilitator Project for further information). Teachers in Academy 20 were required to participate in a training workshop given by the DRP-validated project and in an alternative education course conducted by the University of Colorado at Colorado Springs.

## information source

V.F. Lacy, Counsellor Air Academy High School



## 306 - Colorado State Facilitator Project

school

Bethlehem Lutheran School, Christ-University Hills School

program title

Lutheran Resident Outdoor Education

grade level

5-6

who is involved

All 5th- and 6th-grade children in Denver Area, Colorado Springs and Greeley Lutheran schools may attend. Instructors are classroom teachers from participating schools. Student leaders are from Lutheran High School and Concordia Teachers' College, Seward, Nebraska. A Program Co-ordinator and a Committee are also involved.

objectives

- 1. To foster development of understanding of one's responsibility to God and one's fellow man.
- 2. To develop student appreciation of all aspects of nature as a gift from God.
- 3. To develop the students' outdoor skills.

narrative

Five-day and three-day resident programs are conducted at the Singin' River Ranch, Evergreen, Colorado. Areas of study include Bible study and devotions; plant, water and animal study; geology; astronomy; weather; Soil-testing; compass and mapping skills; and a night hike. Students also engage in recreational activities.

Pre-learning activities are conducted in each participating school prior to the students' departure for the ranch.

Groups are limited to about 25 students for one teacher and one aide.

evaluation

Each classroom teacher conducts a teacher-made post-evaluation at his or her school after the program. Student leaders also evaluate the program.



availability of materials Handbooks for teachers, student leaders, parents and students have been developed. A curriculum guide is available. Contact the Colorado State Facilitator Project for additional information.

special require ments Access to an outdoor site, camping and science equipment are essential. Special in-service workshops are required for staff and student leaders.

information source

Mr. Donald E. Schmidt, Co-ordinator Resident Outdoor Education Denver Area Lutheran Schools



15

## 306 - Colorado Itale Facilitator Project

school

Boulder Valley Institute

program title

Mountaineering

grade level

15 to 21 years of age

who is involved

Boulder Valley Institute students, who come from all over the country.

objectives

- 1. To emphasize the symbolic relationships in order to develop an understanding and unification of the wilderness without and within.
- 2. To become attuned to the obvious growth patterns of the wilderness experience so that one may use those very same patterns in the more subtle opportunities for growth found in everyday life.
- To gain an awareness of and a sensitivity to the mountain environment.
- 4. To broaden one's perspective by developing a reverence for all life, and by discovering one's place in the natural order of things.
- 5. To build self-confidence, will power, courage, group co-operation, and personal growth in general.

narrative

The program provides four avenues for meeting these objectives. Students may participate in any or all of:

- 1. A twice-weekly rock climbing course in which basic skills are taught and attention paid to the emotional responses which are evoked.
- 2. A twice-weekly wilderness experience elective in which seminars on the natural sciences will be given, basic awareness techniques will be practiced in the field, and a personal relationship with the mountains will be developed.
- 3. Numerous weekend trips with varying degrees of difficulty are offered. Basic backpacking and camping skills are taught, with an attention to practical conservation. Opportunities for map-reading, wild flower and edible plant identification, rock and snow climbing, geology, ski touring, and snowshoeing will be available in season.
- 4. A nine-day mountaineering trip concentrates on a major peak ascent and offers an extended opportunity for learning. Numerous stress situations focus attention on the human condition and the struggle for survival.

evaluation

Verbal evaluation among students and staff is constant throughout the course. Student feedback is the primary source. These evaluations are both structured and unstructured, ending with an evening program at the Institute with all the participants in the off-campus experiences.



availability of materials Most can be purchased commercially; amount of materials is dependent on the extent of the program.

special require ments Appropriately-trained staff. Materials as necessary. Those included at the Boulder Valley Institute are technical climbing gear, camping equipment, transportation, books and films.

information source

Sandy Kohn Boulder Valley Institute



## 306 - Colorado Itale Facilitator Project

school

Boulder Valley Institute

program title

Desert Trip

grade level

15 to 21 years of age

who is involved

Boulder Valley Institute students, who come from all over the country.

objectives

- 1. To emphasize the symbolic relationships in order to develop an understanding and unification of the wilderness without and within.

  2. To become attuned to the obvious growth patterns of the wilderness experience so that one may use those very same patterns in the more subtle opportunities for growth found in everyday life.
- 3. To gain a deeper insight into one's existence.

narrative

A nine-day excursion to the high desert country of Utah is the setting for this experience. Backpacking, camping and desert survival are taught. Time is spent observing and often photographing the desert beauty as different habitats are explored. The desert environment lends itself to a penetrating look into ones own being. This is assisted by structured solos, meditative periods and group communications.

evaluation

Verbal evaluation among students and staff is constant throughout the course. Student feedback is the primary source. These evaluations are both structured and unstructured, ending with an evening program at the Institute with all participants in the off-campus experiences.



availability cf materials Most can be purchased commercially; the amount of materials is dependent on the extent of the program.

special require ments Appropriately-trained staff. Materials as necessary. Requirements at the Boulder Valley Institute include camping equipment, transportation and a knowledge of water sources in the area.

information source

Sandy Kohn Boulder Valley Institute



## 306 - Colorado Itale Facililator Project

school district Cherry Creek 5

program title

Pingree Park

grade level

K-12

who is involved

60 elementary students, 30 junior high students, and 45 senior high students from Cherry Creek School District and the Pine Ridge Indian Reservation, South Dakota.

objectives

To help students gain a greater awareness, understanding and perspective of the values and attitudes in man's relationship to man and in man's relationship to his natural environment, so that they may actively support programs which enhance the quality of life in the total environment.

narrative

Students spend from four to ten days in Pingree Park, above Fort Collins, studying the ecology of that area and man's effect on that ecology. Students are encouraged to participate in an interdisciplinary approach to learning art, music, science and social science in relation to nature. Human interaction with new people and a different culture through the creative activities, rap sessions, recreational activities, trust and group exploration hikes, work details, and planning of a community are an important aspect of the program. The students are involved in problem-solving exercises; their techniques for solution are discussed, modified if necessary, and applied to similar problems found in their home environments (suburban Cherry Creek, rural Pine Ridge).

The program began in the summer of 1971.

evaluation

Not available at present.



availability of materials Contact the Colorado State Facilitator Project for information.

special require ments Access to an outdoor site is essential. Three elementary teachers, ten student assistants, five junior high school teachers, seven senior high school teachers, and one nurse are required for Cherry Creek's participating student population.

information source Dan Van Gorp Science Teacher Cherry Creek High School



## 306 - Colorado Itale Facilitator Project

school district

Cheyenne Mountain 12

program title

STOP - Students to Obliterate Pollution

grade level

7-9

who is involved

Between 50 and 80 junior high school students, the American Red Cross, and Cheyenne Mountain's Project Head Start are involved.

objectives

To provide students with experiences in leadership, responsibility, co-operation with others, and self-direction.

narrative

STOP is a student organization designed to foster interest in ecology and improving the quality of life in the Pikes Peak area. Club activities include joint programs with the American Red Cross and Project Head Start, backpacking excursions, and ski touring. Activities are selected, planned and organized by club members. Emphasis is centered on helping others and improving the environment by reducing litter, pollution and the destruction of natural resources and the students' surroundings. Activities are normally held after school hours and on week-ends; meetings are held once a week at 8:00 a.m.

evaluation

Not applicable



availability of materials No special materials are needed.

special require ments Winter activities require special clothing, but most students already have these clothes. Skis and poles are rented when needed. The District provides transportation when possible; parents and teachers assist the students as required.

information source

Robert L. Andreason Cheyenne Mountain High School



## 306 - Colorado Itale Facililalor Project

school district

Colorado Springs 11

program title Sixth-Grade High Trails Resident Outdoor Learning Experiences

grade level

6

who is involved

All sixth-grade students and selected students from grades 10, 11 and 12; the Colorado Outdoor Education Center.

objectives

To foster student environmental knowledge and appreciation, social and personal growth from living and studying together, and recreational skill for leisure enjoyment of the outdoors.

narrative

Approximately 230-250 sixth-grade students from five to seven schools are selected to go each week of camp. There are usually 13 weeks of camp altogether - 8 weeks in the fall and 5 weeks in the spring. A selection of classes from schools having students of low, middle and high economic levels and various socio-ethnic backgrounds are integrated each week. Thirty-six high school students are selected each week from the four area secondary schools to undergo a special leadership training program and to work with the sixth-graders as counselors or teaching assistants.

evaluation

Parent questionnaires are used.



availability of materials

special require ments District 11, in co-operation with the Colorado Outdoor Education Center, has prepared the following materials, which are available at a cost of \$10.00 (please contact the Colorado State Facilitator Project):

High Trails Teachers' Field Guide
Four editions of pre- and post-instructional newspapers
High Trails Student Notebook
High Trails Student Journal
Counselor's Manual
Fourth-Grade Nature Walk Manual
Third-Grade "Our Trip" Manual

Each one-week camp has 36 high school student assistants, 8-10 sixth-grade teachers, one high school advisor and 15-20 High Trails staff from the Colorado Outdoor Education Center. Outdoor site access and camping equipment are needed; a special training program must be conducted for the high school assistants.

35

information source Gene Carroll, Co-ordinator
Elementary Outdoor Education
Colorado Springs School District 11

Sany Sanborn High Trails Camp Colorado Outdoor Education Center



## 306 - Colorado State Facilitator Project

school district Delta County 50 J

program title

The Cultural Relationship of Man to his Environment - Past, Present and Future

grade level

K-12

who is involved

Twelve Project teachers and two principals, representing eight District schools; a community advisory council consisting of individual citizens, students, and representatives of the US Forest Service, Soil Conservation, the County Planning Commission and municipalities.

objectives

K-6: To identify, distinguish and demonstrate the cultural relationship of man and his environment from primitive man to the present. Students should be able to describe orally and in writing his interpretation of man and his changing environment. Students should demonstrate a positive environmental ethic in simulated and real-life situations.

7-9: To analyze the physical and cultural environment of Delta County through student-centered projects, wherein the student will study and define basic traits common to Western rural America. To demonstrate the interdependency of rural and urban citizenry concerning their environments.

10-12: To identify current environmental problems in Delta County and to work toward the solution of them through the study of approved environmental procedures and practices and the construction of an environment-action plan.

narrative

The Community Advisory Council is organized into work committees. The core of Project teachers and principals are actively engaged in instructional development and school and community activities. Instructional media, four outdoor areas, an environmental simulation chamber, and a portable D.C. weather station are being developed.

evaluation

Not yet available



availability of materials Contact the Colorado State Facilitator Project for information on Project-developed materials. Forest Service outdoor education training materials are available commercially from the US Forest Service.

special require ments A two-day workshop, pre-service and in-service training are necessary for participating teachers.

information source

L.L. Livingston, Director Special Projects Delta County School District 50



### 306 - Colorado Itale Facililalor Project

school district Delta County 50 (J)

program title

Energy Crisis Aftermath or How to Survive with Coal on your Doorstep

grade level

K-12

who is involved

All students in primarily rural district

objectives

To develop a school-based model for environmental survival in rural areas having undeveloped or underdeveloped energy resources and reserves.

narrative

The model directly engages students in the challenge of preserving the quality of the local environment as resources are developed to meet the needs of the energy crisis. The model provides alternative educational experiences outside the traditional classroom by involving students with a wide variety of state, federal and local agencies, energy resource development companies, local citizenry and selected segments of urban population.

The program began in the fall of 1974.

evaluation

Not yet available.



Three one-hour courses of instruction and instructional materials; suggested calendar for use. Contact the Colorado State Facilitator Project for information.

special require ments None

information source

Delta County School District 50 (J); ESEA Title III Office, CDE



# 306 - Colorado Itale Facili**lal**or Project

school district

Denver R-1

program title

Environmental Education Teacher In-Service

grade level

K-12 teachers

who is involved

Denver Public Schools classroom teachers and environmental specialists, the US Forest Services, and the Bureau of Land Management.

objectives

This on-going in-service program is designed to give teachers an awareness of environmental education, a basic knowledge of ecology, knowledge of techniques related to specific environmental areas, and strategies for working with students outdoors.

narrative

This in-service program is highly flexible, responding to requests from various teacher populations in Denver R-1, and tailoring each in-service experience to the requests and needs of those involved. Each in-service involves activities done on-site, which may range from Rocky Mountain National Park to various urban areas, and classroom activities. The programs vary in content from awareness approaches to in-depth studies of issues, and they include not only a scientific approach to ecology, but also a political and economic approach.

evaluation

Participating teachers evaluate the experience at its conclusion.



30

A number of materials, including programmed activity cards, have been developed by the District. Contact the Colorado State Facilitator Project for information.

special require ments

In-service director expertise.

information source

John Brennan, Supervisor Science K-12 Denver School District R-1

# 306 - Colorado Itale Facilitator Project

school district

Denver R-1

program title

Environmental Volunteers

grade level

K-12

who is involved

Volunteers from the community, classroom teachers, and District environmental specialists.

objectives

To give students small-group and individual attention in environmental education.

narrative

Community volunteers participate in an entry workshop in which they are given environmental training by District specialists. They are then placed in classrooms, under the supervision of a classroom teacher, and work with small student groups. The result is a small-group situation which would not be possible if the teacher were operating alone.

evaluation

Each volunteer is evaluated by the classroom teacher with whom he or she has worked.



No special materials needed.

special require ments Community co-operation is essential; entry workshops for volunteers must be conducted by environmental education specialists.

information source

John Brennan, Supervisor Science K-12 Denver School District R-1



## 306 - Colorado Itale Facililator Project

school district

Denver R-1

program title

Environmental Education

grade level

8-9

who is involved

Regular or accelerated students

objectives

- 1. To promote an understanding of eco-system fragility and the need for appropriate conservation.
- 2. To give students an opportunity to examine the potential social and economic adjustments necessary for appropriate conservation needs.

narrative

The course examines six areas related to the environment:

- 1. Basic Ecology
- 2. Man's Record on the Earth
- 3. The Conservation Movement in North America
- 4. Environmental Quality Indexes Past and Present
- Potential Social and Economic Adjustments Necessary for Appropriate Conservation Needs
- 6. Possible Consequences in Environmental Qualitied Continue Downward

The course involves the lecture method. Lecture notes, hand-outs, current articles and other available materials are used in lieu of a textbook.

evaluation

Evaluation is conducted on a classroom basis, by teachers, through questionnaires.





Most of the materials are available from the District; contact the Colorado State Facilitator Project for information.

special require ments

None

information source

John Brennan, Supervisor Science K-12 Denver School District R-1



# 306 - Colorado Itale Facililator Project

school district Denver R-1

program title

Balarat Eco-Seminar

grade level

12

who is involved

High school seniors from through the District.

objectives

1. To give students knowledge of career opportunities in environmental areas.

2. To heighten interest in learning generally.

- 3. To impart vocational and pre-professional skills with environmental orientation.
- 4. To impart a sharpened awareness of environmental problems and potentials.

narrative

Students serve as teacher aides on one-day field excursions of younger students. They assist in the development and production of teaching aids and serve as research assistants on topics related to Balarat activities. They prepare special reports and publications, assist with master planning, work with elementary teachers on urban environmental units, plan and organize Balarat Trail Guide projects, prepare and present programs on Balarat for community groups, and plan and organize individual and group activities to fulfill the requirements of the program and individual academic contracts.

evaluation

Evaluation instruments, when formalized, are staff-developed. There is group, including student, evaluation of the overall program and project progress; parental evaluation of overall pupil development; and teacher evaluation of each activity.



36

Most can be purchased commercially; contact the Colorado State Facilitator Project for information.

special require ments Appropriately-trained staff; equipment used at Balarat includes printing, photographic, and scientific equipment. A site with buildings and caretakers and buses are needed.

information source

Balarat Center Denver School District R-1



# 306 - Colorado State Facilitator Project

school district Denver R-1

program title

One-Day Balarat Excursions

grade level

5 and 9

who is involved

objectives

To enrich and extend classroom activities and to extend the realization that environmental understanding involves knowledge from many disciplines. To extend knowledge through direct experiences of basic ecological concepts.

narrative

The program involves a one-day bus trip to a mountain site, enquiry-oriented nature hikes, and field studies. Ninth-grade classes are generally conducted in more depth than fifth-grade classes. A pre-site visit is conducted in order to prepare both teachers and students for the trip. A multi-sensory approach is used to totally involve the student in the day's activities.

evaluation

Evaluation forms are sent out to teachers after the excursion. Pupils evaluate the program on the bus ride home.





Commercial materials; contact the Colorado State Facilitator Project for information.

special require ments Access to an outdoor site is essential; backpacks and microscopes are needed. Appropriately-trained staff.

information source

Balarat Center Denver School District R-1



# 306 - Colorado Itale Facilitator Project

school district East Grand 2

program title

Alternative Education - Outdoor

grade level

7-12

who is involved

The program is open to all students in grades 7-10. The activities offered to 11th-graders are limited to 48 students; the 12-grade Urban Class is limited to 15 seniors.

1. To develop in students a feeling harmony between man and his environment.

2. To foster in students the acceptance of civic responsibility by active participation.

3. To give students the opportunity to acquire knowledge in academic areas through direct learning experiences.

4. To help students realize their individual capabilities, enhancing self-concept; expand their personal limits and capacities; clarify a personal value system; and accept challenges to master and control fear.

5. To help students break down barriers which give rise to human alienation and recognize individual responsibility in group living situations.

6. To encourage awareness and full appreciation of beauty in one's environment.

7. To increase the physical fitness of students.

Seventh grade: a one-day hiking trip in the fall to study the history and ecology of Rocky Mountain National Park.

Eighth grade: a two-day, two-night camping and hiking experience, which includes extensive hiking, work in camp craft, study of the area and work in the affective area.

Ninth grade: a one-day winter survival trip in March, which includes cross-country skiing into the high country, snow caving, winter camping and group dynamics.

Tenth grade: a one-night, two-day river rafting trip on the Colorado River from Radium to Bond; includes river technology, camp craft, geology, compass work, Colorado history and work in the affective area.

Eleventh grade: two five-day Green River trips (Dinosaur National Monument and Desolation Canyon); includes extensive exposure in cognitive, psychomotor and affective areas.

Twelfth grade: a one-quarter course in urban living that culminates in a 3-5 day experience in Denver, providing exposure to various extremes of urban life and conditions.

objectives

narrative

FRIC

evaluation

Pre- and post-tests covering cognitive and some affective areas are administered. Student questionnaires, parent questionnaires, and subjective teacher evaluations are also used. Contact the Colorado State Facilitator Project for additional information.

availability of materials Contact the Colorado State Facilitator Project for information.

special require ments

Appropriately-trained staff; camping and river equipment.

information source

Wayne Benesch, Chairman, Alternative Education; Robert Bingham, Chairman, Outdoor Education East Grand School District #2



#### 306 - Colorado State Facilitator Project

school district Harrison 2

program title

District-Wide Interdisciplinary Outdoor Education Program

grade level

4-6

who is involved

All students in grades 4, 5 and 6

objectives

- 1. To stir awareness and curiosity in the student concerning the outdoor environment.
- To develop student insight into natural life processes.
- To develop a value system in students based on the principle of harmonious interaction within the environment. This involves awareness of the impact of outdoors on man, awareness of man's integral part in his environment, and developing the feeling of individual well-being in the outdoors.
- To foster respect and love for (and proper use of) the environment.
   To develop a realistic appreciation of the dangers inherent in the outdoors and an individual attitude that can cope with challenge.

narrative

The program's emphasis is increased student awareness, through an experiential process, of our natural and man-made environments. The following content areas are emphasized:

- Life Systems
- Man's Impact 2.
- Earth Science
- The Universe
- Recreation Problem-Solving Group and Individual
- Awareness and Attitude-Building
- Activities

The program is a five-day residential living situation with the planned instruction program utilizing various aspects of the outdoor surroundings.

evaluation

Not yet available



Materials are currently being developed by District staff.

special require ments There is no cost to the student, but he or she must furnish his/her own sleeping equipment. A YMCA camp is used (cabins and cooking staff).

information source

John Stansfield Pikes Peak Elementary School Harrison School District 2



# 306 - Colorado Itale Facililator Project

school

Holy Cross Abbey, Order of Benedictines

program title

Rocky Mountain Ecology

grade level

10

who is involved

Sophomore biology classes of The Abbey School; aid in organization came indirectly from the Biology Department of Western State College, Gunnison. The US Forest Service is used as a resource.

objectives

To study and discuss the climate and its governing effect upon the vegetation associations located on the Front Range.
 To emphasize to the beginning biology student the interrelationships

between the living community and its physical and chemical habitat.

3. To initiate the student to analytical processes as he enquires into the local habitat.

narrative

The course stresses the idea of ecological interdependence and new ways of looking at the occupied habitat. During the latter part of April, a week-end seminar is held at the Monestary's Abbot's Lodge, Westcliffe, in the Sangre de Cristo mountains. A series of lectures deals with climate, soil and vegetation associations; course content is aided by concrete examples on the site. The week-end also serves as a retreat for social and spiritual sharing away from campus life, providing an opportunity for teacher-student contact outside the school environment.

evaluation

Frogram evaluation is based on student-teacher and teacher-Dean of Faculty conferences.







Course materials consist primarily of literature from private sources and libraries.

special require ments An outdoor site, preferably with a permanent housing facility; food and transportation.

information source

John A. McPherson, Chairman Science Department The Abbey School



#### 306 - Colorado State Facilitator Project

school district Jefferson County R-1

program title

Biological Sciences Curriculum Study Workshop

grade level

10-12

who is involved

Teachers of science, social studies, language arts and other disciplines.

objectives

- Students will reflect on and identify those things he or she values most or deems essential for quality of life.
- 2. Students will examine the relationship between "valued things" and environmental elements to identify potential questions for investigation.

  3. Students will plan and conduct an investigation of the question
- either individually or as a team member.
- Students will analyze their data and communicate their findings to audiences which they have selected.
- Students will evaluate the efforts in relation to their values and the experience.

nachative

Teachers who sign up for this in-service program receive credit and materials for implementation. In return, they promise to incorporate the unit in their program at some point during the remainder of the academic year.

There is a three-phase program in which teachers participate to prepare for the program. A half-day orientation session acquaints them with the program and enables them to talk with teachers who have used it. Participating teachers then meet for evening sessions to participate in problem-oriented investigations through "Investigating Your Environment". Finally, some time is spent with techniques such as values clarification skills, participation in the problem-solving process, and idea-sharing. The module is implemented in classes during this period. The program is geared to the development of abilities of problem-solving, decision-making and effective interaction with others.

evaluation

Not applicable



The commercially-available BSCS module "Investigating Your Environment" is used as a foundation for the course (Biological Sciences Curriculum Study, P.O. Box 930, Boulder, Colorado 80302). There are student and teacher handbooks. Variations in implementation depends on the community and local concerns.

special require ments In-service for involved faculty members is important. Teachers need assistance in developing a facilitation style of teaching. It is helpful to involve in the process teachers who have already used the materials and curriculum developers. The three-phase in-service may take about five months from the introduction of the materials to the classroom implementation. Use of community resources is essential. The Jefferson County R-1 Environmental Education Office will identify local teachers and others who may be contacted as resource people. Please contact the Colorado State Facilitator Project for information.

information source

B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1



### 306 - Colorado Itale Facilitator Project

school district Jefferson County R-1

program title Earl Johnson School Site Curriculum Development

grade level

Δ

who is involved

Fourth-grade teachers interested in developing school site experiences.

objectives

1. To help fourth-graders learn about one or more environmental concepts designated for development on a particular site.

2. To incorporate into each learning experience activities that apply or set the stage for introducing "established objectives" from language arts, reading, math, science, social studies and bionomics. The activities replace the subject area objectives super-ordinate to the environmental education objectives specified at given sites.

narrative

The activities were developed around the unique environmental resources of one specific school site. Steps taken by the writing team include:

- 1. Listing the specific environmental concepts developed by creating learning experiences on the site.
- 2. Identifying the curriculum areas that can be extended and complemented by incorporating these environmental concepts.
- 3. Working with the appropriate subject area co-ordinators to further identify and develop these concepts.
- 4. Outlining the general scope of environmental experiences on the site for grade levels.
- 5. Developing a format, including behavioral objective statement, for each learning encounter to be written.
- 6. Writing out materials.

Issues include urban sprawl and population growth, renewable resources, noise pollution, and others.

evaluation

Evaluation is based upon the number of teachers who enrolled and upon the in-service programs developed. Teacher use of the curriculum with students is an important factor. Contact the Colorado State Facilitator Project for information.



Not applicable

special require ments

A group of teachers who have skills in experiential education and are motivated to develop curricula around an interdisciplinary problem-centered approach to learning is essential. The teachers must be more interested in the processes involved in education than in the content of specific subject areas.

information source

B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1



#### 306 - Colorado Itale Facilitator Project

school district

Jefferson County R-1

program title Elementary Science Revision

grade level

3-6

who is involved

This is an interdisciplinary curriculum project involving teachers, science consultants, health education and environmental education specialists.

objectives

To revise the 3-6 science curriculum so that students will:

- 1. better understand the interrelationship between man, his culture and his biophysical surroundings;
- 2. understand that man is a part of the whole and is dependent upon the healthy functioning of the eco-system;
- 3. develop an environmental ethic which is compatible with the finiteness of Earth and its resources.

narrative

The revision was made after an examination of desired student outcomes and needs. The program consists of units containing parts of science, health and environmental education goals. The whole sequence of units is subject to change, dependent upon the results of field-testing.

evaluation

Contact the Colorado State Facilitator Project for information.



Many of the activities and units have been adopted from materials of the Science Curriculum Improvement Study and the Biological Sciences Curriculum Study. A teacher's guide will Le available in June, 1978.

special require ments In-service is an important component of the complete program.

information source B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1



#### 306 - Colorado Itale Facililator Project

Jefferson County

school district

Jefferson County School District R-1

program title

**Energy Conservation** 

grade level

K-12

who is involved

At present 28 schools are involved in an energy efficiency curriculum. Contact agencies include Public Service and the Federal Energy Administration and the Colorado State Department of Education.

objectives

- 1. To develop awareness of current values toward energy consumption and the advantages of the wise use of energy.
- 2. To determine the needs within each school for energy efficiency.
- To develop and implement an action plan and document energy savings.
   To broaden the scope by extending the plan for awareness and involvement into the community.

narrative

The energy efficiency teams from 28 schools, composed of students, custodians, teachers, administrators and community members, participated in a workshop during which they examined current values of energy consumption and the advantages of wise use of energy. Information was provided which included each school's electricity and gas usage for one year. The teams then formulated an action plan based upon their energy usage. They planned to increase the awareness level of the member energy school and decrease the consumption by at least 15%. Implementation of the school efficiency programs to make people more aware was demonstrated through several methods. Student-initiated workshops were held, with idea-sharing, models and small group discussions (solar units and wind turbines). Poster contests, energy awareness weeks, energy carnivals, energy conservation clubs, student publications on energy conservation, and bonus learning sessions (for students in Concept Six schools) all formed part of the program.

evaluation

Evaluation was based on documentation of energy saved and demonstration of change in attitudes and energy consumption patterns in students' life styles.



52

Public Service, Federal Energy Administration, and Colorado Department of Education Jefferson County Mini-Curriculum.

special require ments An initial concern for energy conservation; participation of people from the community; a method of documenting actual energy savings.

information source Jefferson County Public Schools Environmental Education Office



### 306 - Colorado Ptale Facililator Project

school district

Jefferson County R-1

program title

Environmental Community Resource Person

grade level

K-12

who is involved

Teachers and students who are interested in using the community as a source of environmental information.

objectives

The resource person will:

- 1. serve as a liaison between the school and the community;
- 2. help students and teachers locate environmentally-oriented community resources;
- 3. identify community agencies, organizations, and contact persons within these groups who are interested in working with schools.

narrative

Teachers often do not have time to identify community groups and ways in which they may help students further their environmental understanding. A member of the community who is aware of available resources assists teachers in better utilizing community groups willing to incorporate students into their activities. At present the Jefferson County liaison person is employed by the District on a half-time basis.

evaluation

No formal evaluation is conducted. The extensive use of the community liaison person by District teachers and students and subjective evaluations indicate the success of the program.



Not applicable

special require ments Selection of the community liaison person is based on the individual's knowledge of community environmental groups and agencies and on his knowledge of the educational system.

information source B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1



# 306 - Colorado Itale Facilitator Project

school district Jefferson County R-1

program title

Environmental Living

grade level

10-12

who is involved

Pupils who have completed one year of laboratory high-school science, including ninth-grade biology.

objectives

- 1. To develop an understanding of living outdoors.
- 2. To develop an understanding of land navigation.
- 3. To develop outdoor safety habits, hiking, and survival skills.
- 4. To develop an appreciation of a natural environment.

narrative

This one-semester course includes the study of geology, astronomy, plants and animals common to the Rocky Mountains, identification of edible plants and animals and their preparation, first aid, land navigation, desert survival, Arctic survival, camp crafts, outdoor living (leadership and party organization, outdoor recreation and safety, physiological problem indicators).

evaluation

The program is evaluated by the students, teachers, and co-ordinator.



Contact the Colorado State Facilitator Project for information.

special require ments

None

information source

L.M. Thomas, Executive Director Secondary Curriculum Jefferson County School District R-1



# 306 - Colorado State Facilitator Project

school district Jefferson County R-1

program title

Escalantee Canyon Eco-Trek

grade level

Teachers of grades 5-12

who is involved

Group size is limited to 15 teachers. A member of the Environmental Education District staff serves both as group member and as organizer. Depending on the site chosen, travel plans may have to be filed with appropriate agencies, including the District.

objectives

- 1. To give participants a first-hand experience in a back-country setting and practice in related outdoor skills.
- 2. To provide some formal learning activities in environmental education.
- 3. To provide group and individual activities designed to furnish a mixture of decision-making and responsibility-sharing.

narrative

One hour of local district credit is available to participants. Length of the trips vary, as does the cost to participants. On each trip, time is devoted to history, written expression, river study, lostproofing and other outdoor skills.

evaluation

Evaluation is based on informal measures such as participation and responsibility assumed during the trip.



No formal materials available.

special require ments Appropriately-trained staff to help the group plan the trip (previous experience with the chosen site would be helpful). Costs should be shared equally by participants. Camping equipment is necessary.

information source

B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1

# 306 - Colorado Itale Facililator Project

school district

Jefferson County R-1

program title

Extended Outdoor Education Experience (Ski-Touring)

grade level

8-12

who is involved

Students from several secondary schools in the District who sign up for the trip. Each participating school sets its own criteria for selecting students. Groups are limited to 16, with two instruct accompanying each group.

objectives

- 1. Students will learn about and develop an appreciation of the winter environment.
- 2. Students will learn skills associated with outdoor survival and success in the winter, from skiing to camp-making.
- 3. Students will develop self-reliance as they successfully meet challenges.
- 4. Students will appreciate the value of planning for needs and emergencies.

narrative

For most participating schools, the trip is an annual one-time event. The length of time spent in preparing students for the trip varies from school to school. The trip route is carefully planned in advance and a copy is filed with the District Environmental Education Office. The skills emphasized vary from group to group, but they include ways of making a comfortable adjustment to a winter environment, ski skills such as wax selection, pine-tarring skis, and others. Stress is placed on appreciation of the natural and wild environment.

evaluation

No formal evaluation is undertaken. A measure of the program's success is the continuing number of students and teachers who are interested in participating.



No formal text is used. Each school provides students with its own outline of things needed, things to watch for, etc. Content depends on each instructor.

special require ments Appropriately-trained staff; camping equipment; transportation to and from the outdoor site.

71

information source B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1

# 306 - Cólorado Stale Facilitator Project

school district ②efferson County R-1

program title

Float Trips

grade level

10-12

who is involved

Several District high schools sponsor float trips; each school has its can criteria for selection of students. Group size is limited to about 20 students and four or five accompanying adults.

objectives

- 1. To give students an opportunity to learn the value of functioning as a team.
- 2. To foster student awareness of the plant and animal inhabitants of the region and their interrelationships.
- 3. To increase student awareness of the impact of man on the environment and the value of wild areas to man.

narrative

The canyons currently used for float trips are Dinosaur National Monument, Westwater Canyon, Gray Canyon, and Desolation Canyon; other sites are being investigated. Students are taught to manage rafts properly. Two days are spent on the water, with side trips on land into the canyon. Attention is focused on the inhabitants, history, and preservation of the area.

A River Specialist and Raft Instructors assist the students. Each eightperson raft is a unit unto itself; the entire group must work toward common goals and share responsibilities.

evaluation

Evaluation of students is largely affective and based on staff observation of student behaviors (no grade is assigned). Program evaluation is also subjective and based on student and community interest in and support of the program.



The District has prepared a pamphlet, "River Policy and Procedures", which deals with safety, sanitation, equipment use, river procedures, and emergencies. Contact the Colorado State Facilitator Project for purchasing information.

special require ments It is very important that advance arrangements be made with the appropriate agency (usually the Bureau of Land Management) to get a permit and fix a date for the trip. A River Specialist with thorough knowledge of the selected river and surrounding area, a Raft Instructor, and other adults who can teach students camping and other outdoor skills are essential (in Jefferson County they are drawn from District staff; teacher training is provided to those who do not have sufficient background). If several District schools participate, an Advisory Committee with representatives of the students, faculty, co-ordinators, Bureau of Land Management and any other involved groups is used to prevent and solve many problems.

Rafts and camping equipment are essential.

information source B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1



### 306 - Colorado Itale Facililutor Project

school district

Jefferson County R-1

program title

Forest Service Workshops

grade level

Teachers of grades K-12

who is involved

Teachers from throughout the District (group size is limited). The US Forest Service conducts the workshops.

objectives

- 1. To provide teachers with a variety of strategies in dealing with students in environmental education.
- To provide teachers with experience in problem-solving approaches.
   To provide teachers with a chance to work together on a common goal and to interact.
- 4. To put teachers in touch with other professionals in the area.

narrative

The series of activities begins with an examination of problem-solving approaches in education and continues with a variety of environmental investigation plans. There are suggested simulations and techniques and a variety of other classroom approaches. The workshop requires three and a half days and may include some field experience. Teachers are assessed a \$15.00 fee plus a tuition fee if college credit is sought. Scheduling of the program is contingent on Forest Service personnel and time available.

evaluation

No formal evaluation of the program is conducted. Class members are given either a Pass or Fail.



Participants receive the US Forest Service notebook <u>Environmental</u> <u>Education for Teachers and Resource People</u>. Contact the Colorado State Facilitator Project for information.

special require ments None

information source

B.J. Meadows, Co-ordinator Environmental Education Jefferson County R-1

Gary Severson US Forest Service



## 306 - Colorado State Facilitator Project

school district

Jefferson County R-1

program title

**Environmental Community Studies Program** 

grade level

10-12

who is involved

Students and faculty interested in environmental programs may take part. There are  $\beta$  lans to eventually expand the program to each District senior high school. The County Extension Service, representatives of higher education, and individuals from the community at large are also involved.

objectives

- To develop student awareness of and interest in the community.
- 2. To practice decision-making with group members in the anticipation of community group membership.
- 3. To establish, through investigation, values for selecting involvement in conservation issues and choosing community resources.
- 4. To provide students with experience in problem-solving.
- 5. To facilitate action leading to goals in accordance with group values.

narrative

The program calls for a non-traditional approach, stressing co-investigation by teacher and student. Stress is placed upon understanding other viewpoints and positions and then making decisions. The emphasis on choice and commitment are co-equal with the investigative experience. The model stresses the use of community resources and people in the process and co-operation with various groups.

evaluation

Not available



No standard curriculum guide is available; materials vary from building to building.

spécial require ments Staff and student commitment to an experiential approach to environmental problems, parent and community support, and released time for participating faculty to work with community groups are essential.

innom nation sounce

B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1



### 306 - Colorado Itale Facililalor Project

school district

Jefferson County R-1

program title

Environmental Studies Day Camp

grade level

4-5

who is involved

Students who will be entering grades 4 and 5 the following autumn may apply to this summer program (group size is limited). The program is co-sponsored by the District, the Jefferson County Extension Service, and the Community Development Program.

objectives

- 1. Students will have opportunities for experiences with plants, animals, soil and other aspects of the natural environment.
- 2. Students will be introduced to outdoor skills.
- 3. Students will share planning activities and responsibilities.

narrative

Each day of the week-long program has specific activities scheduled. The fifth-grade program involves a greater varie' of sites than does the fourth-grade program. Both programs stress evelopment of healthy, positive environmental attitudes and parent munication.

evaluation

No formal evaluation is conducted.



No formal curriculum guide or materials are used.

special require ments This program is self-supporting; fees of \$8.00 per pupil for the fourth-grade groups and \$20.00 per pupil for the fifth-grade groups are assessed. College interns are hired for on-site supervision for the week. Additional college or high-school staff are used to maintain a staff-pupil ratio of 1:10. A Community Development Aide supervises both programs and is "on call" at all times. The District provides necessary outdoor equipment (backpacks, water bottles, etc.) and transportation to and from the site.

information source B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1

# 306 - Colorado Itale Facilitator Project

school district Jefferson County School District R-1

program title

Operation Sundance - Interdisciplinary Environmental Education through Domestic Solar Energy Technology

grade level K-12

who is involved

The focus of the program is on K-9 students at one site in the system; however, over 800 children, parents and adults from the lay community are involved. Groups focusing on solar energy activities frequently have visitors from the program as well.

objectives

- To develop children's sensitivity to the interdependency of man and nature; to increase their consciousness of factors affecting their lifestyles and to encourage documentation of their involvement in this process.
- To develop children's confidence in using technological systems and interdisciplinary processes to solve real environmental problems.
- To provide an opportunity for children to learn through a multi-age, multi-skill situation, involving sharing ideas and skills with adults.
- 4. To provide, through a series of four phases in which the learner can enter at any phase and work in either direction, opportunities to work with groups on complex topics and also to work individually on specific areas of interest.
- To use interdisciplinary problem-solving skills in an area filled with technological and social issues; to facilitate integration of the inter-

disciplinary problem-solving process into District pilot program schools. Operation Sundance encourages experiential involvement with contemporary

environmental problems focusing on solar energy through research, "handson" activities and field trips. Groups of children aged 6-15, staff, parents and community volunteers are working together through an interdisciplinary approach, individually contributing their own specific skills to collectively develop solutions for local environmental problems. The children are encouraged to research, discuss and identify community problems and needs related to energy, environment and conservation; they then move into the various interest areas of the school to pursue the skills necessary to solve the problems: basic math, geometry, measuring, scaling, science, communications, writing, scale modeling and construction techniques. Through group planning sessions, they share their individual skills and resources to design models of workable solutions which can be completely designed, built used and maintained by the children, parents and volunteers. When feasible, full-scale models are developed for study and demonstration in the school and in the greater Evergreen community. Solutions are developed around the concept of domestic technology, emphasizing efficiency and applicability for individuals or families at a reasonable cost.

The staff has approached evaluation from various viewpoints: 1) discussion of individual children; 2) evaluation of group and individual projects;

narrative

evaluation



3) feedback from other school staff and adult community participants; 4) feedback from students involved in the program. All participants in the program are requested to document their projects, processes and comments.

Booklets and brochures have been prepared by children and staff to help evaluate the process and to be used as resource and dissemination material in other schools. A dissemination kit is not yet available but is planned in the future. At present, the brochure may be obtained upon request and resource materials on the greenhouse design and individual projects may be purchased from the program.

special require ments

Community interest and adults involved in the area of solar energy technology are important, as well as school and faculty interest. There would need to be some cost for the purchase of materials for full-scale models, but, because of the stress on domestic technology, the cost is not extravagant. The program would probably need to depend on donations of construction materials for many of the large-scale projects.

information source

Malcolm Lillywhite Judy Zimmerman Operation Sundance Evergreen Open Living School



#### 306 - Colorado State Facilitator Project

school district

Jefferson County R-1

program title

Resource Center

grade level

K-12

who is involved

The Center is open to District teachers of all disciplines at all levels and to students individually or by group appointments.

objectives

- 1. To provide a variety of viewpoints on environmental issues to students and teachers.
- To provide information on a wide scope of environmental issues.
   To provide resources to teachers for classroom and outdoor activities.
- 4. To give teachers a variety of ways to communicate information to students.

narrative

The Center contains books, magazines, pamphlets, films and filmstrips, simulations, kits for testing water, soil and other environmental factors, backpacks, sleeping bags, maps, compasses, and other outdoor equipment, which may be checked out for two to three weeks.

evaluation

No formal evaluation is conducted. District teachers and students use the Center extensively.





The District has prepared a list of materials available at the Center and a list of community environmental groups and agencies. Contact the Colorado State Facilitator Project for purchasing information.

special require ments Staff with environmental education background and with library science training would be helpful in the operation of a resource center.

Adequate facilities for storage and display of materials are important. Funds required for materials purchase would depend upon the scope of the center.

Systematic record-keeping procedures are essential.

information source

B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1



# 306 - Colorado Itale Facililator Project

school district Jefferson County R-1

program title

Teacher Mini-Courses

grade level

K-12

who is involved

Any District K-12 teacher may enroll. Participating agencies or individuals depends upon the course topic.

objectives

In general, participants are exposed to conflicting points of view on the course topic and are expected to apply some information-gathering and problem-solving skills. Specific objectives depend up n the course topic.

narrative

Topics have included: water resources, electrical energy, oil shale, mining and minerals, land use, and transportation. Courses usually consist of one evening's presentation of differing viewpoints, followed by the interaction of the speaker and audience (two to three hours). An all-day field trip, usually on Saturday, concentrates on visible evidence of the topic in the immediate area and related problems.

Participants are responsible for field trip expenses.

In-service credit for the mini-courses is given through the District.

evaluation

Evaluation is based on degree of teacher participation in the course. Program evaluation is based on teacher response to topics offered.







No standard texts are used. Local issues serve as the focal point.

require ments Appropriately-trained staff and actively-involved community people are important. Sites should be carefully selected and field trips scheduled well in advance.

information source

B.J. Meadows, Co-ordinator Environmental Education Jefferson County School District R-1



### 306 - Colorado Itale Facilitator Project

school district Park R-3

program title Mountain Emergency, Rescue and Survival Training

grade level

9-12

who is involved

Co-operative instruction is conducted by a District teacher with expertise in the field, the National Park Service, the US Forest Service, the Larimer County Sheriff's Posse, local fire-fighting units and local doctors.

objectives

To teach students to prevent and handle somes ancies and sensitize them to the responsibilities and problems of a cain resort area. with strong emphasis on first-bid. To train students in search and rescue techniques and fire-fighting so that they may serve as community volunteers. To promote better understanding of mountain recreation and potential perils.

Harrative

The class is conducted for one quarter. Instruction includes two mock search-and-rescue drills. After completing the course, students may join the high school club and be available for community service.

evaluation

No formed evaluation is conducted. In 1974-75 trained students performed successfully on five real search-and-rescue missions.



76

Teacher-de: gned materials have been developed in co-operation with supporting organizations. First-Aid books and Cold Weather and Mountain Survival books are also used.

special require ments One District staff momen; community co-operation essential. Special training equipment necessary.

information source J. Gorden Rudel
Park School District R-3



#### 306 - Colorado State Facilitator Project

school district Platte Canyon Re 1

program title Environmental Education Experience

grade level

K-12

who is involved

All District students and faculty; community members; the US Forest Service; and the Mile-High Girl Scout Council participate. The project was initially funded by ESEA Title III (Individual Teacher Grant).

objectives

- 1. To originate and mark a self-guided nature trail for community and school use.
- 2. To increase the environmental awareness, appreciation, and competence of the community.
- 3. To develop teaching strategies for environmental education.

narrative

Initial Project work focused on the development and marking of hiking trails in mountain terrain. A trail guide and teacher's guide have been developed, including information, references and activities for developing major concepts listed in the trail guide and teachers is conducted by the Project training for the Project training for teachers is conducted by the Project training for teachers is conducted by the Project training for the Proje

The Project's philosophy is that the environment must be renewed through respect and understanding.

evaluation

Formal evaluation has been conducted by the Colorado Department of Education and by the US Forest Service. Community, teacher, and student evaluations of the trails is used. Teachers evaluate student performance on specific trail objectives.



Most of the materials used were produced by the Project Director. Contact the Colorado State Facilitator Project for information.

special require ments Access to a large outdoor area is essential.

information source

Ned Levine Deer Creek Elementary School Platte Canyon School District 1



#### 306 - Colorado State Facilitator Project

school district Platte Canyon Re 1

program title Snowbound

grade level

3-6

who is involved

ESEA Title III (Individual Teacher Grant); two instructors.

objectives

- 1. To teach the students to make and use snowshoes
- 2. To teach fundament cross-country skiing techniques and equipment upkeep.
- 3. To teach basic first-aid techniques for cold weather.
- 4. To teach students to read winter animal and weather signs.
- 5. To teach compass use and computation of bearing and direction of travel.

narrative

Students are taught basic cross-country skiing techniques, snowshoeing, first aid and winter survival. Physical prowess with equipment is stressed to enhance individual growth. Supportive education is given in the science of meteorology and animal tracking.

evaluation

The Colorado Department of Education conducted an on-site evaluation. Contact the Colorado State Facilitator Project for information.



Materials are purchased commercially.

special require ments Each instructor's group should be no larger than 15 pupils. Appropriately-trained staff and outdoor equipment are necessary.

information scurce

Ned Levine Deer Creek Elementary School Platte Canyon School District 1



### 306 - Colorado Itale Facilitator Project

school district Poudre R-1

program title Nature Center

grade level

K-12

who is involved

ESEA Title III; two full-time Nature Center Co-ordinators from the graduate Recreation Resources Department, Colorado State University; resource teachers; classroom teachers.

objectives

To provide a facility for the outdoor study of natural eco-systems and man's interaction with them, while preserving and controlling the area used.

narrative

The Center is housed in a large trailer classroom which remains on the site. It contains environmental exhibits, scientific equipment, written and audio-visual materials. The program for each class visit may be designed by the Center Co-ordinators, the classroom teacher, or all three co-operatively, and the activities during the visit may be conducted jointly or by the teacher or the Co-ordinator(s) only. Each grade level has specific objectives for Center activities in the classroom/interpretive center and in the field.

evaluation

Evaluation is conducted by specific grade-level objectives.



82

The District has developed a teacher's manual, Trail Tips; Environmental Education Curriculum Guide; and Environmental Education Project Activity Books. Please contact the Colorado State Facilitator Project for Information; availability is limited.

special require ments An outdoor site and a permanent facility to house the Center are essential. Two full-time co-ordinators are needed to man the Center in Poudre (K-12 population about 13,000). Development of a Resource Center and surrounding field area requires environmental education specialists and resource teachers.

information source

Dr. Howard Alden, Department Head Department of Recreation Resources Colorado State University

Owen Smith, Director
Environmental Education
Poudre School District R-1



#### 306 - Colorado State Facilitator Project

school district

Poudre R-1

program title

Resident Camp

grade level

6

who is involved

All District 6th-grade students, classroom teachers, Colorado State University, and the US Forest Service are involved. High school students and parents often serve as teacher aides.

objectives

- 1. To provide children an opportunity for a wilderness experience in Colorado high country.
- 2. To help children understand the Life Zone and other concepts of environmental sciences.
- 3. To provide a better school climate through closer teacher-pupil and pupil-pupil interaction in resident settings.

narrative

The week of environmental experiences includes two one-day trips to grassland and brushland life zones and a three-day, two-night residence at a US Forest Service camp. Each school designs its own program with the assistance of camp staff, including pre-camp, in-camp and post-camp activities.

evaluation

Each school conducts its own evaluation of the program according to District objectives.



84

The District has developed a Teacher's Handbook, Student Workbook, and Songbook.

special require ments Access to wilderness sites (the mountain site should have housing facilities); in-service for teachers. A staff of four is assigned permanently to the camp during the period it is used by the District.

information source

Owen Smith, Director Environmental Education Poudre School District R-1



## 306 - Colorado State Facilitator Project

school district St. Vrain Valley Re-1J

program title

Environmental Discovery School II

grade level

7-12

who is

Students who have attended the Environmental Discovery School I; teachers who have applied for the position and who have had experience with the School I and/or other wilderness experience.

objectives

To provide students with a first-hand wilderness experience. Subobjectives include:

- 1. To provide students with both environmental awareness and appreciation
- 2. To provide experience and knowledge of mountain ecology and geology.
- 3. To learn skills related to backpacking and wilderness survival.
- 4. To teach students to cope effectively with emergencies and unexpected events.

narrative

Several sessions are scheduled during the summer. Groups are limited to 14 students and two instructors. Five days are spent in a wilderness area learning essentials of backpacking and wilderness skills, safety measures, and care and appreciation of the area. These skills are learned from first-hand experience as well as the guidance of the instructors. The instructors have content outlines to provide all groups with similar experiences, but the emphasis may vary slightly from group to group.

evaluation

Evaluation is affectively-oriented and depends to some extent on teacher observation of the development of skills and self-reliance in students.



Materials are secondary to the experience, but students receive short pamphlets regarding conditioning, preparation for the trip, and logistical information. There are other printed materials that stress dealing with emergencies, evacuation procedures, and community expected problems in the wilderness. As long as they are available, these pamphlets may be purchased from the District. Contact the Colorado State Facilitator Project for information.

special require ments The program must have access to a wilderness area; the presence of a well-trained, effective staff with knowledge of local ecology and geology; student transportation to and from the site; an insurance plan to which parents may subscribe (St. Vrain arranged in 1974-75 for a company to cover students for \$20.00 each). Camping equipment, cooking utensils, and first-aid materials will need to be purchased. Students must repair or replace damaged materials at their own expense. A fee of about \$25.00 per student may have to be assessed for transportation and equipment.

information source

Quentin Paker Co-ordinator Science and Environmental Education St. Vrain Valley School District Re-1J



### 306 - Colorado Itale Facilitator Project

school district Steamboat Springs Re 2

program title

Outdoor Educational Experience

grade level

3-5

who is involved

Third-, fourth-, and fifth-grade students and teachers; Wild Life Conservation Officers; community members.

objectives

- 1. To foster positive student attitudes toward the environment and its conservation.
- 2. To offer students an opportunity to become involved in real-life situations through problem-solving and simulated games.
- 3. To help students realize their own worth as individuals.
- 4. To help students learn to make use of leisure time.

narrative

Following the philosophy that education does not stop when a child leaves the school building, a District elementary staff member designed a five-part Outdoor Education program which enhances the direct learning technique. The program includes:

- 1. A creative playground which allows children to express themselves while playing.
- 2. Field trips to study science: a cross-country ski and bicycle trip enables children to study ecology and the environment with Wild Life Conservation officers.
- 3. Habitat and outdoor classroom for environmental and habitat studies.
- 4. Winter sports and directed noon-hour activities to help students make wise use of leisure time.
- 5. An interdisciplinary program for fourth- and fifth-graders, enabling them to study the environment and problems of Steamboat Springs through a two-day residency.

evaluation

Contact the Colorado State Facilitator Project for information.



Contact the Colorado State Facilitator Project for information.

special require ments Special playground equipment; skiing and bicycling equipment; contact the Colorado State Facilitator Project for additional information.

information source

Patrick Cunningham Steamboat Springs School District Re 2



## 306 - Colorado Itale Facililalor Project

school

University of Northern Colorado Laboratory School

program title Man and His Environment

grade level

K-12

who is involved

objectives

narrative

Lab School students, faculty, administration, selected resource specialists, and UNC undergraduate and graduate students.

#### Students will:

1. demonstrate an understanding of the role of man as an ecological factor in the environment;

2. demonstrate an appreciation, awareness and concern for environmental resources by manifesting attitudinal and behavioral change;

3. perceive the importance of maintaining harmony between man and his environment by promoting environmental ethics.

#### Teachers will:

1. effectively use community, natural and environmental resources in teaching;

2. effectively use a multi-sensory approach in teaching;

3. provide opportunities for exploratory experiences leading to student observation, investigation and discovery;

4. involve the students in planning, conducting and evaluating these experiences;

5. implement an interdisciplinary approach and a direct "first-hand" approach in teaching.

The environmental studies program is organized in the form of specific curriculur patterns integrated into the existing Lab School curriculum. Students are provided opportunities to observe, explore and investigate environmental resources to identify man's sound and unsound environmental practices. The school hopes that ultimately students will manifest "environmental ethics" which will enable them to become active conservators of the natural environment.

evaluation

Not yet available



Contact the Colorado State Facilitator Project for information.

special require ments Contact the Colorado State Facilitator Project for information.

information source

University of Northern Colorado Laboratory School



#### 306 - Colorado Itale Facilitator Project

school district Westminster School District #50

program title

Resident Outdoor Education Program

grade level

6

who is involved

All sixth-grade students in nine of the sixteen elementary schools in the district participate.

objectives

#### To develop:

- 1. an appreciation of and respect for the environment
- 2. an awareness of natural surroundings
- 3. an improvement of personal relationships
- 4. an orientation to survival skills
- 5. self-orientation of one's relationship with the environment

narrative

Sixth-grade students from participating schools are involved in a three-day resident program. The present site is a rented one. The program follows the state's objectives, but the activities and the order in which they are followed may vary from school to school. The program is staffed by district teachers and is supplemented by resource persons from various institutions.

evaluation

Teacher evaluation of program; contact the Colorado State Facilitator Project for further information.

92



Each school designs its own program and is responsible for getting its own resources from the District Instructional Materials Center.

special require ments In-service training for the staff. Depending on the school, staff may involve teachers, outside resource persons and/or interns.

information source

Mrs. Virginia Way, Science Co-ordinator Westminster School District #50



### 306 - Colorado Itale Facililalor Project

school district

Westminster School District #50

program title Multi-media Multi-disciplinary Resource Center (Education for Survival)

grade level

K-12

who is involved

All district teachers may request materials for classes from the Center.

objectives

- 1. To create in learners an understanding of man's interdependence with the environment.
- 2. To examine attitudes in relation to man's interdependence with the environment.
- 3. To investigate levels of environmental values conflicts, looking for resolutions.
- 4. To provide valid materials and resources for many student experiences in environmental education, with different levels of learning and conceptualization.
- 5. To stimulate learners to participate actively in programs consistent with their environmental view.

narrative

Teachers of any classroom in the system have access to the catalogue listing materials. Materials are listed by grade levels, subjects, titles and descriptions. The order is forwarded to the central location and the items are delivered as soon as possible. A wide variety of materials are catalogued, including films, games, kits, sets of pictures and filmstrips.

evaluation

Evaluation includes formative evaluations of student attitudes, interests and behaviors on environmental issues. A Steering Committee and liaison people (students and teachers) provide feedback on direction and use of materials. Interviews and opinionnaires are also extensively used. Data relative to usage for the 1974-75 school year is available. Contact the Colorado State accilitator Project for further information.



A catalogue listing the materials is available through ERIC or may be purchased from Westminster School District #50. (ED 093298 88 - IR 000 781)

special require ments The program requires personnel to maintain the service center and to provide training for school personnel. Audio-visual equipment and office supplies are needed for several activities.

information source

Mrs. Virginia Way, Science Co-ordinator Westminster School District #50



95



## 306 - Colorado Itale Facililator Project

school district

Widefield 3

program title

Summer Youth Environmental Program (SYEP)

grade level

6

who is involved

The program is primarily supported by ESEA Title I; the staff is composed of District personnel.

objectives

- 1. To enrich reading, language arts, mathematics, science, social science, art, music and physical education classroom experiences.
- 2. To improve relationships between teachers and students.

3. To whet the child's appetite for learning.

4. To provide a program that will improve behavior, attitudes, values and self-concept for each child.

narrative

Approximately 150 students from target area schools who have been identified as achieving below grade level in reading, math or language arts are eligible for the program. Three four-day sessions involving 50 students at each session are held during June and July. The program activities include those designed to increase knowledge of the out-of-doors, such as orienting and nature hikes; those designed to build self-confidence and responsibility, such as climbing and endurance hikes; and those designed to foster creativity, such as creative writing sessions and arts and crafts. Field math problems are part of the program. Students are taught to make environmental identifications and to distinguish acceptable conservations practices from unacceptable practices.

evaluation

Subjective evaluation and a locally-constructed checklist are used.



Not yet available.

Special - require -- ments Appropriately-trained staff; access to a facility that has overnight accommodations; equipment for orienteering and rock-climbing.

information source Leonard C. Bartel, Director Research, Development and Evaluation Widefield School District 3



## 306 - Colorado Itale Facililator Project

school district

N/A

program title

Colorado Outdoor Education Center

grade level

K-12, young adult; college undergraduate and graduate credit in outdoor education available.

who is involved

The Center has developed programs in co-operation with: Colorado Springs School District 11; Academy School District 20; Eagle County School District RE 50J; Aspen School District 1; The Children's School of Colorado Springs; Colorado Deaf and Blind School; Colorado College; Colorado University; American Camping Association, Rocky Mountain Section; California State

University Foundation for the Advancement of Environmental Education; University of Massachusetts Department of Education; Southwestern Librarians' Association; National Education Association; Audubon Society; Young Life (Houston and Dallas).

objectives

To provide environmental education, recreation and leisure time learning, and social experiences and personal growth, through small learning groups and learning-by-doing situations.

Programs are conducted at three Centers: the High Trails Outdoor Education Center, five miles southwest of Florissant, Colorado; the Big Spring Outdoor Education Center, 1½ miles from High Trails; and the Colorado River Outdoor Education Center near Cypsum, Colorado. Every week, students from several different schools and communities, representing diverse social, economic and cultural backgrounds, live together in cabins at the Centers. They attend Discovery Groups focusing on Rocks and Minerals, Ecology, Language Arts, Nature Crafts, Local History, Field Math, and Conservation. Each student is given the opportunity to explore further any area of special interest during free choice periods, includie such activities as digging in copper mines and fossil beds, visiting an old working ranch, and participating in an extended orienteering course. Special morning and evening programs include talks by National Forest and Park Service personnel, astronomy, and many history- and nature-oriented campfire programs. A variety of recreational activities is offered. High school students who serve as counselors to the elementary students undergo a leadership program. The Centers also sponsor a number of special trips, programs and seminars, some designed for young adults and college freshmen.

A mobile Nature Wagon tours over forty elementary schools in the Colorado Springs area. It contains over 30 exhibits emphasizing awareness and use of the outdoors and is also equipped with a number of slide shows and learning kits which are used by classroom teachers. Nature games are played in the school \_ard. A reference library and equipment for experiments are available. K-6 students are conducted through the Wagon by an outdoor teacher and several junior and/or senior high student assistants.

name

ERIC POULTERS PROVIDED UN ERIG

evaluation

availability of materials

special require ments In 1967 the Centers served 28 students and teachers; in 1973 they served 38,259 students and teachers (elementary and secondary levels). Contact the Colorado State Facilitator Project for information on individual school district program evaluations.

Specific curricula, programs and organizational techniques have been developed by the Center. Contact the Colorado State Facilitator Project for information.

Staffed by thirty educators, the Colorado Outdoor Education Center is a non-profit, tax-exempt educational institution supported by contributions from the general public. Several of its programs have been integrated into school district curricula. Contact the Colorado State Facilitator Project for additional information.

information . source Colorado Outdoor Education Center

## 306 - Colorado Itale Facililalor Project

NAME OF ORGANIZATION

Adolph Coors Company Golden, Colorado 80401

SERVICES AVAILABLE

"It All Starts With Me" color, animated slide presentation on the recycling of beverage containers and conservation of natural resources; reduction of litter.

GRADE LEVEL

Elementary School, Junior High School

HOW OBTAINED

Contact any Coors beer distributor

WHO IS INVOLVED

The Coors "cash-for-cans" recycling program is operated by 167 independent coors distributors throughout 11 western states.

DESCRIPTION OF SERVICES

All Coors distributors pay 15 cents a pound for aluminum beverage containers regardless of brand and a penny each for all Coors bottles when these containers are returned to distributor redemption centers.

Participation in the program is urged through the use of slide presentations such as listed above.

AVAILABILITY OF MATERIALS

Several days notice is needed to give disbtibutors enough time to plan a presentation at a school.



100

None. However, it would be nelpful to have more than one class view the program to maximize distributors' time.

COST

Free

INFORMATION SOURCE

Adolph Coors Company, Public Relations Dept. 1280 West 47th Avenue, Denver, Co. 80211

or

Distributions.



NAME OF ORGANIZATION

American Forest Institute Project Learning Tree

SERVICES AVAILABLE

Curriculum guides, workshops

GRADE LEVEL

K-12

HOW OBTAINED

For workshops, contact George Ek, Conservation Programs, Colorado Department of Education, State Office Building, Denver

WHO IS INVOLVED

Colorado Department of Education

DESCRIPTION OF SERVICES

Curriculum guides have been developed containing activities on forests and the environment. Workshops are scheduled through CDE to introduce teachers to the guides.

AVAILABILITY OF MATERIALS

The guides are available only through attendance at the workshops. Several other supplementary teaching units, wall displays for kindergarten through grade 12 are available through the American Forest Institute.



None

COST

INFORMATION SOURCE

Project Learning Tree - no cost

Learn to Love Trees (elementary teaching unit) - one copy free;
additional copies 5¢ each plus postage

Trees Want You (secondary teaching unit) - one copy free; additional copies 10¢ each plus postage

Growth of a Tree chart and teaching suggestions - one copy free;
additional copies 20¢ each plus postage

Forests and Trees of the US map and teaching suggestions - one copy free; additional copies 20¢ each plus postage

American Forest Institute 1619 Massachusetts Avenue, N.W. Washington, D.C. 20036

NAME OF ORGANIZATION

Cheyenne Mountain Zoo

SERVICES AVAILABLE | The Living Classroom

GRADE LEVEL

3 - 12

HOW OBTAINED

Advance appointment by telephone

**GEVICYMI SI OHW** 

Trained tour guides (docents)

DESCRIPTION OF SERVICES

Visiting classes are divided into groups of no more than 10 students per docent. Ninety-minute tours available are:

Mammals and Adaptation - grades 3 and up What is a Mammal? - grades 9 and up The Primate World (60 minutes) - grades 9 and up An Introduction to Birds (60 minutes) - grades 5 and up What is a Bird? - grades 8 and up Animals and Ecology - grades 5-7

Special tours may often be scheduled on special topics.

AVAILABILITY OF **MATERIALS** 

N/A





N/A

COST

No cost to El Paso County school groups; outside school groups should contact the zoo for admission fee schedule

INFORMATION SOURCE

Cheyenne Mountain Zoological Park Box 158 Colorado Springs, Colorado 80901 475-9555

NAMÉ OF ORGANIZATION Colorado Association of Soil Conservation Districts

SERVICES AVAILABLE

Information exchange, sponsorship

GRADE LEVEL

K-12; adult

HOW OBTAINED

Through local Soil Conservation Districts

WHO IS INVOLVED

84 Soil Conservation Districts, State Soil Conservation Board

DESCRIPTION OF SERVICES

The Association sponsors the Allis Chalmers/National Association of Conservation Districts Environmental Education Teacher of the Year and Environmental Education Conservation District of the Year.

The Association assists conservation districts in sponsorship of Youth Conservation Boards, which actively pursue and help carry out local community conservation projects. It also co-operates with such youth organizations as 4-H, Future Farmers of America, Conservation Youth Camps, and Voice of Youth in environmental activities.

AVAILABILITY OF MATERIALS

Contact local conservation district



special Reduirements None

COST

None

INFORMATION SOURCE

CASCD Executive Secretary 7250 South Pennsylvania Littleton, Colorado 30122



NAME OF ORGANIZATION

Colorado Open Space Council

SERVICES AVAILABLE

Speakers, slide shows, publications

GRADE LEVEL

7-12

HOW OBTAINED

By telephone or written request

WHO IS INVOLVED

Volunteers from the Council and other citizen environmental groups

DESCRIPTION OF SERVICES

The talks and slide show presentations deal with land use, wilderness and the citizen environmental movement. Newsletters on general environmental matters, wilderness and state legislation are available. A movie entitled, "The Water Plan" concerning the proposed Two Forks Dam and its political repercussions may be rented. A Council publication Analysis analyzes bills and voting records of the state legislature. Many other publications on Council studies of oil shale, coal leases and other environmental issues are on file; the files are available for student research.

AVAILABILITY OF MATERIALS

Upon request



Two weeks' notice for speakers and slide-tape presentations

COST

INFORMATION SOURCE

Honorarium for speakers (to be discussed with Council)
Movie rental - \$10.00
Legislative Analysis - \$3.00 per copy
One year's subscription to general Council newsletter, Conservator - \$10.00
One year's subscription to Wilderness Workshop Newsletter - \$8.00
Weekly Legislative Bulletin (during session) - \$10.00

Bonnie McCune, Administrator Colorado Open Space Council 1325 Delaware Avenue Denver, Colorado 80204 573-9241



NAME OF ORGANIZATION

Colorado Open Space Council

SERVICES AVAILABLE

Wilderness Workshop

GRADE LEVEL

7-12

HOW OBTAINED

Contact the Council Office

WHO IS INVOLVED

Members of the Council and other citizen environmental groups who have background in environmental sciences

DESCRIPTION OF SERVICES

A Wilderness Walks program is offered from June through October to the general public and school groups. One-, two- or three-day hikes are taken into areas which are not protected as wilderness, in order to show the current threats to undeveloped lands.

Educational workshops are given throughout the year statewide. They range from half-hour or one-night presentations to wilderness preservation courses lasting eight weeks. Speakers are available for slide presentations and talks on general wilderness issues or on specific current topics.

AVAILABILITY OF MATERIALS

Handout materials on various wilderness issues are given out at workshops and are available from the Council office. A monthly newsletter is published for members and other interested citizens.



N/A

COST

INFORMATION SOURCE

Membership in the Workshop, including newsletter subscription, is \$8.00 per year. Complimentary subscriptions are available. All courses, workshops, presentations and handout materials are offered at no cost for those who cannot afford a fee. Fees are negotiated for those who can pay.

Mary Ellen Cuthbertson Ted Tomasi Colorado Open Space Council 1325 Delaware Street Denver, Colorado 80204 573-7870



NAME OF ORGANIZATION

Colorado OUTWARD BOUND School

SERVICES AVAILABLE

OUTWARD BOUND courses (21-23-day expeditions)

GRADE LEVEL

Persons aged 16½ - up.

HOW OBTAINED

Contact OUTWARD BOUND

WHO IS INVOLVED

The University of Colorado is a co-operating institution of higher education.

DESCRIPTION OF SERVICES

A Speakers' Bureau will provide instructors and resource people who will talk to groups about OUTWARD BOUND and show films, upon request.

Self-discovery and confidence-building are the objectives of the standard OUTWARD BOUND course. All courses include rock-climbing, rappeling, peak ascents, gorge crossings, solo and marathon, as well as training in backpacking, camperaft, map-reading and compass-reading. Special courses are offered for Women Over 30; Business Managers; Educational Administrators; Administrators in Corrections; and Metropolitan High-School Groups. Teachers may receive three semester hours of graduate credit from the two Teachers' Practicums given every summer. A Master's Degree in Experiential Education is offered in conjunction with the University of Colorado to train administrators in the area of OUTWARD BOUND adaptive programs.

Consulting services are available to other institutions, schools or agencies adapting OUTWARD BOUND concepts into existing structures.

AVAILABILITY OF MATERIALS

A large listing of reports and articles on OUTWARD BOUND and related programs is available upon request.



A requirement for the coed course is that the participants be at least 18 years of age. There is no upper age limit for any of the courses.

COST

Tuition for a standard course is \$550; tuition for the Teachers' Practicum is \$600.

INFORMATION SOURCE

Colorado OUTWARD BOUND School P.O. Box 9038 Denver, Colorado 80209 (825-0880)



NAME OF ORGANIZATION

Colorado Water Congress

SERVICES AVAILABLE Education and information regarding wise management, conservation, and development of Colorado's water resources.

GRADE LEVEL

Elementary through University

HOW OBTAINED

From water resource professionals throughout the State and from their interactions with associates in regional and national organizations.

WHO IS INVOLVED

Officers and Executive Committee of the Water Congress--consisting of water leaders representing each of the river basins of the State.

DESCRIPTION OF SERVICES

Water Congress officials willingly serve as speakers and/or tour leaders to disseminate information about various aspects of water use in Colorado. Emphasis is directed toward instilling awareness as to how water affects our lives. This pattern of water education encompasses man's relationship with his natural and manmade surroundings including the environmentally sensitive interfaces among population, pollution, water resource allocation and depletion, conservation and transportation. The impacts which public and governmental attitutes have on complex water issues are discussed. Also included are economic considerations as they relate to balanced development and conservation of water.

AVAILABILITY OF MATERIALS

Although much printed and audio-visual material exists, the characteristics of each audience need to be identified in order to select the materials to fit that group.



Ample advance notice in order to secure the services of highly qualified leaders.

COST

There normally would be no charge for the personal services of Water Congress officials.

INFORMATION SOURCE

Mr. Frederick Caruso
Executive Director
Colorado Water Congress
328 Livestock Exchange Building
Denver, Colorado 80216



NAME OF ORGANIZATION

Conservation Library
Denver Public Library

SERVICES AVAILABLE

Reference, research assistance

GRADE LEVEL

Secondary - Graduate

HOW OBTAINED

For prepared bibliographies, write to Kay Collins, Conservation Specialist, Denver Public Library. Other services are obtained by visiting the Library.

WHO IS INVOLVED

Library staff

DESCRIPTION OF SERVICES

The Conservation Library provides information and materials on environmental education and research assistance on environmental topics. Previously-prepared bibliographies can be requested by mail. The Library will assist school and system libraries in locating and obtaining materials for collections.

AVAILABILITY OF MATERIALS

Environmental education materials are primarily for use in the library; some other environmental materials may be checked out with a Denver Library card.







Not applicable

COST

Library staff will do extensive searches for a fee. Photocopying fees are charged.

INFORMATION SOURCE

Kay Collins, Conservation Specialist Conservation Library Denver Public Library Main Building: 1357 Broadway Denver, Colorado (573-5152)



NAME OF ORGANIZATION

Denver Zoological Gardens

SERVICES AVAILABLE

Tours

GRADE LEVEL

Contact the Denver Zoological Gardens for information

HOW OBTAINED

Write or call the zoo office between 8:30 a.m. and 4:00 p.m., Monday through Friday

WHO IS INVOLVED

Trained volunteer guides

DESCRIPTION OF SERVICES

The zoo maintains moated pens which provide herds of native and exotic hoofed animals range-like habitats. A special part of the zoo is set aside for young visitors why may experience contact with a variety of domestic and wild animals. Log cabins and barns are century-old replicas scaled down to child size. Other points of interest include the Feline House, Giraffe House, Pachyderm House, Monkey Island, Primate Building, Bird World, and Exotic Waterfowl Exhibit. Bear Mountain, a realistic man-made rock formation, displays bears and sea lions in their natural habitat.

AVAILABILITY OF MATERIALS

Printed information for teachers is available upon request.

129



none ---

COST

none

INFORMATION SOURCE

Denver Zoological Gardens City Park Denver, Colorado 80205 297-2754



NAME OF ORGANIZATION

Educational Resources Information Analysis Clearinghouse for Science, Mathematics, and Environmental Education.

SERVICES AVAILABLE 1. How to Use ERIC: Environmental Education, a brochure (free)

2. <u>Information Bulletin</u>: <u>Environment</u>, a series (free)

3. Various publications related to environmental education (list free)

GRADE LEVEL

All--but primarily for teachers and other educators, as well as other interested persons, college students, etc.

HOW OBTAINED

Write for information; request brochure (#1 above) and addition to mailing list (#2 above), as well as publication list (#3 above):

Educational Resources Information Analysis Clearinghouse for Science,
Mathematics, and Environmental Education

400 Lincoln Tower

The Ohio State University Columbus, Ohio 43210

(614) 422-6717

WHO IS INVOLVED

ERIC/SMEAC is funded by the National Institute of Education (DHEW) as one of a number of clearinghouses collecting, processing, and analyzing information related to various areas of education. ERIC/SMEAC staff are primarily faculty members at The Ohio State University.

DESCRIPTION OF SERVICES

Publications, as indicated above;

2. Announcement of environmental education materials through Resources in

Education and Current Index to Journals in Education;

3. Availability of many materials in hard (Xerox) copy and/or microfiche, through Educational Document Reproduction Service. Materials include research reports, curriculum guides, etc.

AVAILABILITY OF MATERIALS

As indicated above.



None

COST

Some materials free as above; others at cost.

### INFORMATION SOURCE

Dr. John F. Disinger, Associate Director for Environmental Education at above address; other information available from George Ek, or from Denver Public Library (Kay Collins).

NOTE: Persons wishing to use the ERIC system for environmental education should request the <u>How to Use</u> brochure, as a starting point.

Resources in Education and <u>Current Index to Journals in Education</u> are available to many libraries; Colorado locations of ERIC microfiche collections are appended.



NAME OF ORGANIZATION

Educational Resources Information Clearinghouse (ERIC) for Social Studies and Social Sciences

SERVICES AVAILABLE

Research, publications

GRADE LEVEL

N/A

HOW OBTAINED

Searches - Computer Search Service ERIC/CHESS

Documents - ERIC Document Reproduction Service

ERIC/CHESS 855 Broadway

Boulder, Colorado 80302

P.O. Box 190 Arlington, Virginia 22210

WHO IS INVOLVED

DESCRIPTION OF SERVICES

The clearinghouse is one of 16 NIE-funded clearinghouses which acquires, selects, indexes and abstract documents and journals in the field of education. Documents on environmental education, dealing with its social aspects, are in the scope of ERIC/CHESS and may be viewed in microfiche form at ERIC stations or purchased. Documents are indexed and abstracted in a monthly publication, Research in Education; journals are indexed and annotated in a monthly publication, Current Index to Journals in Education. Types of documents available include research reports, curriculum, teaching and resource guides, bibliographies, directories, speeches, monographs, books, and program descriptions.

The clearinghouse also publishes information analysis products:

Environmental-Ecological Education: A Bibliography of Fiction, Non-Fiction and Texbooks for Elementary and Secondary Schools, Lois B. Watt and Mrya Thomas, 1971.

Environmental Education Programs and Materials, Stanley L. Helgeson, 1971.

Environmental Education: Sources and Approaches for the Social Studies Teacher, Martha T. Henderson, 1970.

The Environmental Problem. Selections from Hearings on the Environmental Education Act of 1970, edited Irving Morrissett and Karen B. Wiley, 1971.

AVAILABILITY OF MATERIALS



None

COST

Searches from the Computer Search Service - \$15.00 (up to 50 citations on the print-out); \$.10 per citation after 50

INFORMATION SOURCE

Carol Rayburn
Administrative Assistant
ERIC Clearinghouse for Social Studies/Social Science Education
855 Broadway
Boulder, Colorado 80302
492-8434



NAME OF ORGANIZATION

Environmental Action of Colorado, Inc.

SERVICES AVAILABLE

Speaker; reprint service; catalogues.

GRADE LEVEL

10-12

HOW OBTAINED

Call or write Environmental Action of Colorado, Inc.

2239 East Colfax Avenue Denver, Colorado 80206 321-1645 or 320-6537

WHO IS INVOLVED

DESCRIPTION OF SERVICES

EAC has a selection of 6 20-minute color films on energy subjects available for rental or could accompany speaker. Speaker would also provide reprints for distribution to classes. Reprinted material is very useful in courses on energy, environment.

The speaker's areas of special expertise are solar and nuclear energy and energy conservation.

The Environmental Action Reprint Service (EARS) offers a wide variety of solar and nuclear information.

AVAILABILITY OF MATERIALS

Catalog of printed material and audio-visual aides available from EAC.



124

None

COST

There is a \$15.00/hour charge for the speaker and a charge of  $10 \, \text{¢}$  a mile to and from school and EAC Office.

INFORMATION SOURCE

Environmental Action of Colorado, Inc. 2239 East Colfax Avenue Denver, Colorado 80206



NAME OF ORGANIZATION

Jefferson County Conference and Nature Center Breeden House

SERVICES AVAILABLE

Nature trails, exhibits

GRADE LEVEL

HOW OBTAINED

Contact the Center

WHO IS INVOLVED

Trained youth guides

DESCRIPTION OF SERVICES

The Conference and Nature Center spreads across 1200 acres of elk-fenced area on top of Colorado Peak. Environmental exhibits displayed in the Breeden House vividly depict environmental impacts and sound management practices. Trained youth are available to interpret the mountain eco-system along the trails for large groups. Conferences and meetings can be scheduled at Breeden House.

AVAILABILITY OF MATERIALS

The Center's hours are 10:00 a.m. to 5:00 p.m. daily.

126



none

COST

Contact the Center for information

INFORMATION SOURCE

Jefferson County Conference and Nature Center Lookout Mountain Route 5, Box 900 Golden, Colorado 80401 277-0855



## 306 - Colorado Itale Facililalor Project

NAME OF ORGANIZATION Keep Colorado Beautiful, I.

PURPOSE/FUNCTIONS

To develop and implement programs for prevention, abatement and control of litter. To educate the state citizenry concerning solid waste and conservation of natural resources.

SERVICES AVAILABLE

Displays, audio-visual materials, printed hand-out materials, speakers, consultants on solid waste problems and natural resource conservation.

GRADE LEVEL

Not applicable

HOW OBTAINED

Contact Keep Colorado Beautiful, Inc. 4260 East Evans Avenue Denver, Colorado 80222 757-2272

WHO IS INVOLVED

Available to general public

DESCRIPTION OF SERVICES

In co-operation with the Director of Environmental Education, Northern Colorado Board of Co-operative Educational Services, Keep Colorado Beautiful sponsors a mobile environmental Eco-Bus which travels the state and is available for junior high schools and public occasions. Contact Dr. Richard Casebeer, NCEBOCS, 330 South Lincoln, Longmont, Colorado 80501 for scheduling information.

Keep Colorado Beautiful offers films, speakers, research information, plans for litter prevention and beautification action programs, litter bags and decals. The agency sets up displays throughout the state. It offers expertise on solid waste problems and solutions and education on the conservation of natural resources.

AVAILABILITY OF MATERIALS

Curriculum aids are available to all teachers throughout the state. These consist of films, classroom visual aids, resource literature and flyers.



None

COST

No cost to anyone in Colorado; contributions welcome

INFORMATION SOURCE

Keep Colorado Beautiful, Inc.



NAME OF ORGANIZATION

SERVICES AVAILABLE

GRADE LEVEL

HOW OBTAINED

WHO IS INVOLVED

DESCRIPTION OF SERVICES

National Audubon Society

Audubon's Mobile Environmental Education Project

K-12; College

Through local chapter or by writing to:

Mr. Jay Reed, Director Audubon's Mobile Environmental Education Project P.O. Box 3232 Boulder, Colorado 80303

Local resource people, organizations, school districts, and agencies interested in environmental education.

The primary function of the project is teacher training, with emphasis on the intermediate level (4-6). Teacher workshops are conducted to assist the classroom teacher in developing skills and techniques of using the surrounding world as a teaching tool. Emphasis is multicurricular in design; the workshops try to incorporate the man-made as well as the natural environment in a diversity of learning experiences in science, math, social studies, and language arts. An experiential, learning-by-doing process is employed. The focus is on incorporation of environmental education into the existing curriculum; processes are adapted to local needs, available materials, and existing or easily-developed resources. Credit may be worked out with the State Department of Education or a Colorado institution of higher education.

Workshops for adult or senior leaders of youth groups are also offered on much the same basis as the teacher workshops. Emphasis is on supplementing and enriching the leader's ability to facilitate learning experiences for children in environmental education. Demonstration teaching with students is done in conjunction with workshops.

Time is available on a limited basis for consultation with individuals, school districts or organizations who wish to develop nature centers, nature trails, or other environmental programs. Speakers are available to give talks, presentations and workshops for teachers-in-training or students in interpretive naturalist programs in institutions of higher education. Speakers can give presentations to community adult groups concerning environmental education of the community's youth.

The project can conduct workshops with other environmental, conservation or natural history organizations to help them develop their own educational programs.



130

### AVAILABILITY OF MATERIALS

The project's services are contained and transported in a van which serves as a teacher resource center and contains files of environmental education materials from across the country (applicable to the Rocky Mountain West). The van also houses a library of approximately 350 volumes concerned directly with environmental education. Some of the materials may be copies and some may be ordered; none are for sale. Catalogues of the Audubon Teaching Aids in Natural Science are also available.

Facilities are not available for write-in requests for materials.

### SPECIAL REQUIREMENTS

The project serves Colorado, Wyoming, Montana, Idaho, Utah, and Arizona and time is limited in each state. Priority is given to rural areas without or with limited existing environmental education programs.

COST

None

INFORMATION SOURCE

Mr. Jay Reed, Director Audubon's Mobile Environmental Education Project







NAME OF ORGANIZATION

National Recreation and Park Association

PURPOSE/FUNCTIONS

An independent, non-profit, public interest organization representing citizen and professional leadership in the recreation and park movement in the United States and Canada. The Association provides comprehensive community services to all facets of the park, recreation and leisure field.

SERVICES AVAILABLE

Workshops, technical assistance

GRADE LEVEL

Not applicable

HOW OBTAINED

Contact the NRPA Western Service Center (see "Information Source")

WHO IS INVOLVED

Membership includes professionals, associates, students, agencies, organizations, institutions, affiliates, corporations and interested citizens. The Association brings together 62 affiliated state and provincial societies in the US and Canada, and includes branch organizations which serve the special needs of their memberships.

DESCRIPTION OF SERVICES

Conducts workshops, forums and training institutes for its members. Activities include programs for the development and upgrading of professional standards; a personnel referral service; dissemination of innovations and research; consumer protection; program development and technical assistance to members and to all Federal, state, county and city agencies.

Current (1975) programs involve, among others, improved facilities and programs in correctional institutions, playground safety, new public school curricula in leisure, and support for land use reform.

AVAILABILITY OF MATERIALS

Pamphlet "An Invitation to Joint the National Recreation and Park Association" is available upon request.





None

רחכז

Professional membership - \$50; Associate - \$20; Student - \$15; Affiliate - \$100; Organization/Institution - \$100; Agency - dues based on population.

INFORMATION SOURCE

Mr. Frank D. Cosgrove, Director NRPA Western Service Center P.O. Box 6900 Colorado Springs, Colorado 80934

NAME OF ORGANIZATION

The Nature Conservancy

SERVICES AVAILABLE

Natural areas are available for field study; speakers, slide presentations

GRADE LEVEL

1-12

HOW OBTAINED

Written or telephoned request

WHO IS INVOLVED

Community volunteers

DESCRIPTION OF SERVICES

The Colorado Chapter owns several natural areas in various parts of the state that can be made available for field trips or for nature and scientific studies, when compatable with the primary purpose of preserving natural values.

The Rocky Mountain Regional Office supplies speakers and slide presentations.

AVAILABILITY OF MATERIALS

Nature preserves are located between Denver and Broomfield; southwest of Steamboat Springs; southwest of Walsenburg; and adjoining Gore-Eagles Nest Wilderness Area, northwest of Dillon.

134



None

COST

None

INFORMATION SOURCE

Colorado Chapter The Nature Conservancy 820 16th Street, Suite 420 Denver, Colorado 80202

623-8088 .

The Rocky Mountain Field Office shares this address and telephone.





### 306 - Colorado Itale Facililalor Project

NAME OF ORGANIZATION

Safari Club International Conservation Fund

SERVICES AVAILABLE

Curriculum manual "Environmental Respect - a New Approach to Outdoor Education"

GRADE LEVEL

7-12

HOW OBTAINED

Schools may request the manual by contacting Dr. Eugene Decker, Wildlife Department, Colorado State University; Denver Chapter, Safari Club International, #5 Denver Technological Center, Englewood 80110

WHO IS INVOLVED

Denver Chapter, Safari Club International

DESCRIPTION OF SERVICES

The services are designed to help build outdoor citizenship and include development and implementation of conservation curriculum and materials (lesson plans, activities, resource listing, and time-saving organizational ideas). Activities are organized around basic ecology and management principles and relate to respect for the land, wildlife, and one's fellow man.

AVAILABILITY OF MATERIALS

Available upon request



The involvement of school principals and administrators together with other staff is highly desirable.

COST

None

INFORMATION SOURCE

Dr. Eugene Decker Wildlife Department Colorado State University Fort Collins, Colorado 80523 (491-5656)



NAME OF ORGANIZATION

Thorne Ecological Institute

SERVICES AVAILABLE

Workshops, seminars, week-end backpacking hikes

GRADE LEVEL

1-12 and adult

HOW OBTAINED

Contact the Institute

WHO IS INVOLVED

Metropolitan State College

DESCRIPTION OF SERVICES

Residential and non-residential programs in outdoor environmental education are conducted for young people. Community Environmental Field Studies, Programs for Decision-Makers, Natural History Seminars (college credit) and Living With Nature Backpacking Week-ends are conducted for adults.

AVAILABILITY OF MATERIALS

N/A

138



N/A

COST

INFORMATION SOURCE

Community Environmental Field Studies - \$8.00 + \$3.00 bus fee Backpacking Week-Ends - \$16.00 + \$5.00 food fee Natural History Seminars - course tuition + credit fee (contact the Institute for current fee schedule)
Programs for Decision-Makers and Outdoor Education - costs vary

Thorne Ecological Institute 2336 Pearl Street Boulder, Colorado 80302 443-7325

NAME OF ORGANIZATION

Trees for Today and Tomorrow

SERVICES AVAILABLE Community Awareness

GRADE LEVEL

All ages

HOW OBTAINED

Contact Dr. Feucht or Mrs. McClearn.

WHO IS INVOLVED

Co-Chairmen: Dr. James Feucht, Extension Professor, Horticulture

Colorado State University, 909 York St., Denver, CO 80203

Phone: (303) 355-8306

Mrs. Pat McClearn, 444 Cherry St., Ponver, CO 80220

Phone: (303) 322-1900

45 community agencies--serivce clubs, improvement associations, etc.

DESCRIPTION OF SERVICES

- 1. Develop community awareness programs to control Dutch Elm Disease, Tussock Moth and ohter community-wide pest problems.
- 2. Promote landscape projects in Denver Public School system-
- 3. Promote tree planting by communities and civic groups through incentive programs.
- 4. Assist in Arbor Day programs in schools.

AVAILABILITY OF MATERIALS

Limited material available at present. "Think Trees" bumper stickers and "Plant a Tree" posters.

140



Two weeks minimum notice on public presentations.

COST

No cost for residents of Denver metropolitan area.

INFORMATION SOURCE

Dr. James R. Feucht Extension Professor, Colorado State University (Landscape Plants) Denver Metro Region Department of Horticulture



NAME OF ORGANIZATION

Tricycle

SERVICES AVAILABLE

Recycling program for aluminium, steel and glass containers

GRADE LEVEL

all levels

HOW OBTAINED

Contact Norma Staub at the address and telephone listed under "Information Source"

WHO IS INVOLVED

Eleven Denver Metropolitan Area companies sponsor and pay for the program

DESCRIPTION OF SERVICES

Tricycle offers help to schools and groups in developing a recycling program. A 30-minute slide-tape presentation is also available.

AVAILABILITY OF MATERIALS

Brochures, posters and decals are available upon request.





None

COST

None

INFORMATION SOURCE

Norma Staub Tricycle 9071 West 66th Avenue Arvada, Colorado 80001 422-6303



NAME OF ORGANIZATION

United States Brewers Association

SERVICES AVAILABLE

Talks, slide-tape presentations

**GRADE LEVEL** 

K-12

HOW OBTAINED

Contact: Keep Colorado Beautiful

4260 East Evans Avenue

Denver, Colorado 80222 (757-2272)

Bob Walker

United States Brewers Association

6356 Ingalls Court Arvada, Colorado 80002

WHO IS INVOLVED

A staff member of the Brewers Association gives presentations to schools in Colorado as a voluntary service to Keep Colorado Beautiful.

DESCRIPTION OF SERVICES

Presentations are given to assemblies of K-6 students and a maximum of three classes per presentation in higher grades. The slide-tape presentations are entitled, "Smile, You Live in Colorado" and "Colorado Faces, Places and Things". Both presentations encourage citizens to keep the natural environment clean and beautiful. The presentations last approximately 45 minutes.

AVAILABILITY OF MATERIALS

Available upon request, as scheduling permits.



The slides for the presentation require a special projector; the presentation cannot be scheduled without the Brewers Association speaker.

COST

None

INFORMATION SOURCE

Keep Colorado Beautiful



NAME OF ORGANIZATION

University of the Wilderness

SERVICES AVAILABLE

Field courses

GRADE LEVEL

Ages 15 and up

HOW OBTAINED

Registration

WHO IS INVOLVED

Mentors trained in various fields related to environmental and outdoor skills

DESCRIPTION OF SERVICES

Field courses offered are:

Man in a Subtropical Environment I
Man in a Mountain Environment II
Man in a Cold Environment I
Man in a Desert Environment IV
Special courses for the physically handicapped

Classes are held in Field Centers located in Colorado and Idaho.

AVAILABILITY OF MATERIALS

N/A



Participants must be in good general health

COST

\$50.00 deposit for each reservation; contact the University for course fee schedule

INFORMATION SCURCE

The University of the Wilderness 1325 Delaware Street Denver, Colorado 80204 674-4695



NAME OF ORGANIZATION

Western Regional Environmental Education Council

SERVICES AVAILABLE

Interstate co-operation, co-ordination and development of environmental education

GRADE LEVEL

Pre-school - 12, college

HOW OBTAINED

Through the Colorado Department of Education and the Colorado Division of Wildlife

WHO IS INVOLVED

The 13 Rocky Mountain and Pacific Coast States Council consists of a representative from each state department of public instruction and a state resource agency in each state.

DESCRIPTION OF SERVICES

The Council has developed programs and materials, including guides for the development and use of environmental education materials, and a guide for the use of resource management and education agencies (Satisfice).

The Council plans workshops for educators and resource professionals on Council-developed programs such as <u>Energy and Man's Environment</u> and Project Learning Tree.

Regional planning involves developing roles and responsibilities for state resource management and educational personnel in environmental conservation education.

AVAILABILITY OF MATERIALS

Upon request



148

Publications are limited in supply for special functions and are available to educators.

COST

None

INFORMATION SOURCE

Dick Hess, President Western Regional Environmental Education Council Colorado Division of Wildlife 6060 Broadway Denver, Colorado 80216 (825-1192)





#### NAME OF ORGANIZATION

The Wilderness Society

SERVICES AVAILABLE Voluminous files and information on wilderness and related matters; such as wildlife and watershed. Several films available at no charge. Speakers on wilderness and related matters (need lead time to fit our schedule.)

GRADE LEVEL

Junior High and above.

HOW OBTAINED

Call (303) 758-2266. Write THE WILDERNESS SOCIETY 4260 East Evans Avenue Denver, CO 80222

WHO IS INVOLVED

The Wilderness Society is a non-profit organization of approximately 100,000 members. Headquarters are located in Washington, D.C., with a Western Regional Office in Denver.

DESCRIPTION OF SERVICES

Files, films, and speakers available to schools at no charge. The Society publishes a quarterly magazine, "The Living Wilderness," and wilderness reports, various hearing alerts, and educational information, as appropriate. The Society was established in 1935 to secure the preservation of wilderness, to conduct an educational program concerning the volue of wilderness and how it may best be used in the public interest, to make and encourage scientific studies concerning wilderness as a part of the essential conservation of soil, water, forest, and wildlife, and to mobilize cooperation in resisting the invasion of wilderness.

AVAILABILITY OF MATERIALS

Files, films and speakers available to schools at no charge.



150

None

COST

Information is free. Membership for students, schools and libraries--\$5.00 Regular memberships--\$10.00

INFORMATION SOURCE

THE WILDERNESS SOCIETY 4260 East Evans Avenue Denver, CO 80222



NAME OF ORGANIZATION

Youth and Wild Truth

SERVICES AVAILABLE

Printed information; school programs

GRADE LEVEL

1-12, college

HOW OBTAINED

Contact Youth and Wild Truth

WHO IS INVOLVED

Volunteers from outdoor and sport organizations

DESCRIPTION OF SERVICES

All services are designed to inform and provide assistance in the study of environmental education, wildlife conservation and management, and general plant and animal studies.

The assembly or classroom programs are presented by skilled outdoorsmen. Presentations of 45 minutes to one hour include films and audience response and questioning. Topics examined are how man relates to nature and how man can survive in the wilderness.

Teacher and Leader Packets contain guidelines, leaflets, film lists and other conservation tips.

AVAILABILITY OF MATERIALS

Materials are available upon teacher request.



Some presentations are made before adult clubs and organizations, but Youth and Wild Truth's purpose is to help young people discover truth through exposure to wildlife and nature.

COST

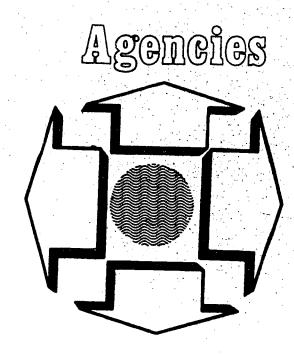
None

INFORMATION SOURCE

Youth and Wild Truth Box 265 South Fork, Colorado 81154







NAME OF AGENCY

Bureau of Land Management

PURPOSE/FUNCTIONS

Administration and multiple-use management of 8.3 million acres of National Resource Lands and Minerals jurisdiction over 40 million acres of land in Colorado.

SERVICES AVAILABLE

Publications, land status and survey records, films and filmstrips, environmental education workshop facilitation and materials, Johnny Horizon program materials.

GRADE LEVEL

4-12

HOW OBTAINED

Contact State or District Offices of the Bureau. See listings under "Information Source".

WHO IS INVOLVED

Environmental education co-cilinacors and natural resources specialists.

DESCRIPTION OF SERVICES

Distribution of natural resource management and environmental education materials; participation in field workshops. Slide presentations and discussion of natural resource/environmental topics with classes (depending on workload). Assistance in developing environmental education areas.

AVAILABILITY OF MATERIALS

Ghoom request.



The Bureau requests reasonable advance notice of speaking requests.

COST

INFORMATION

SOURCE

None

Fil Jiminez
Denver Office
Bureau of Land Management
1600 Broadway, Room 700
Denver, Colorado 80202
837-4481

Canon City District 3080 East Main Street Canon City, Colorado 81212 275-7494

Northeast Area 1010 10th Street Golden, Colorado 80401 234-4988

Craig District 455 Emerson Street Craig, Colorado 81625 824-3289

Kremmling Area Kremmling, Colorado 80459 724-3438

San Luis Area 1921 State Street Alamosa, Colorado 81101 589-4975 White River Area Meeker, Colorado 81641 878-5084

Grand Junction District 223 Federal Office Building Grand Junction, Celorado 81501 242-8515

Glenwood Springs Area 113 9th Street Glenwood Springs, Colorado 81601 945-5478

Montrose District Highway 550 South Montrose, Colorado 81401 249-3491

San Juan Area 1211 Main Street Durango, Colorado 81301 247-4082



NAME OF AGENCY

Bureau of Outdoor Recreation, US Department of the Interior

**PURPOSE/FUNCTIONS** 

Serves as the recreation policy and planning agency for the Secretary of the Interior and administrator of the Land and Water Conservation Fund, which provides recreation grants to states and finances acquisition of Federal recreation lands. The Bureau promotes co-ordinator of outdoor recreation programs.

SERVICES AVAILABLE

Speakers, films

GRADE LEVEL

1-12

HOW OBTAINED

Contact the Bureau at 234-3523 (Golden).

WHO IS INVOLVED

The Bureau serves all Federal agencies, state and local governments, private organizations and individuals concerned with outdoor recreation.

DESCRIPTION OF SERVICES

The Bureau can provide speakers and films on recreation.

AVAILABILITY OF MATERIALS

The Bureau has publications available upon request.



None

COST

None

INFORMATION SOURCE

Angela J. Harrison Bureau of Outdoor Recreation 603 Miller Court Denver, Colorado



#### 306 - Colorado Itale Facililalor Project

NAME OF AGENCY

Bureau of Reclamation, US Department of the Interior

PURPOSE/FUNCTIONS

The Bureau is a water resources development agency that is operationally engaged in the 17 Western states. The Bureau plans, designs, constructs, operates and maintains multi-purpose water projects. These projects store, divert and deliver water for municipal and industrial use, irrigation, hydro-electric power generation, floor control, improvement of water quality, pollution abatement, river regulation and recreation.

SERVICES AVAILABLE

Reference library, film library, laboratory tours, slide presentation

GRADE LEVEL

1-12

HOW OBTAINED

Films and publications: contact Bureau of Reclamation, Engineering and Research Center, Attention: 922, P.O. Box 25007, Denver Federal Center, Denver, Colorado 80225. For laboratory tours, slide programs and general information, contact the same address, Attention: 1422.

WHO IS INVOLVED

DESCRIPTION OF SERVICES

The Engineering and Research Center houses an engineering reference library, which is open to the public, and a film library, containing 16 mm films available on a loan basis (the borrower paying return postage only), as well as two slide programs, "The Reclamation Story" and "Reclamation Research". Schools may schedule tours of the laboratory facility, where classes can see numerous engineering and scientific tests conducted and a demonstration of one of the several working hydraulic structure models (a dam, spillway or canal).

AVAILABILITY OF MATERIALS

Numerous Bureau publications, ranging from general information pamphlets to technical manuals, are available to schools in limited quantities without charge. Other technical publications may be purchased.



None

COST

None

INFORMATION SOURCE

Mr. Warren B. McBirney, Chief Technical Services and Publications Branch Bureau of Reclamation



NAME OF AGENCY

Colorado Department of Education and Colorado Division of Wildlife

PURPOSE/FUNCTIONS

To develop a unified approach to conservation (environmental) and wildlife education by matching long-range student needs with natural renewable resource needs of Colorado and North America for the purpose of building respect and responsibility for our natural resources.

SERVICES AVAILABLE

Environmental and Aservation education

GRADE LEVEL

K-12, college teacher preparation, adult

HOW OBTAINED

Write or call the department of conservation programs, Colorado Department of Education, State Office Building, Denver 80203 (892-3382). For Wildlife and Conservation Films, contact the Colorado Division of Wildlife, 6060 Broadway, Denver 80216 (825-1192).

WHO IS INVOLVED

Jointly financed, planned and administered with the Information and Education Section, Colorado Division of Wildlife, and the Demonstration Unit of the Colorado Department of Education.

DESCRIPTION OF SERVICES

In-service workshops in environmental conservation and wildlife Outdoor study area planning and assistance Audio-visual productions in wildlife and natural resource conservation Television, radio and newspaper coverage on wildlife and environmental issues, including environmental education Wildlife conservation library - a growing repository of wildlife information and audio-visual aids, with increasingly greater emphasis on natural resource use Educational assistance upon request in conservation and wildlife

AVAILABILITY OF MATERIALS

Selected films and materials are available through Colorado Division of Wildlife Regional Offices:

Northeast Region P.O. Box 2287 217 West Prospect Fort Collins, Colorado 80522 484-2836 Northwest Region
P.O. Box 1687
711 Independence Avenue
Grand Junction, Colorado
243-3395
81501

Southwest Region
P.O. Box 788
Montrose, Colorado 81401 (249-3431)
160

Southeast Region
P.O. Box 7148
2126 North Weber
Colorado Springs, Colcrado



Publications and materials are for teacher and library reference.

COST

In general, there is no charge to schools and resource agencies. No classroom sets are provided, but teachers are welcome to reproduce any materials.

INFORMATION SOURCE

Conservation Programs Colorado Department of Education



NAME OF AGENCY

Colorado Department of Health

PURPOSE/FUNCTIONS

Protection of the environment and preventive medicine

SERVICES AVAILABLE

Engineering and sanitation, water pollution control, air pollution control, occupational and radiological control

GRADE LEVEL

1-12

HOW OBTAINED

Contact the office of the Assistant Director

WHO IS INVOLVED

Four divisions of the Department of Health and the Health Education Section.

DESCRIPTION OF SERVICES

Regulatory information, consulting services are offered to schools and other agencies and organizations concerning selection of health education materials and programs available, and assistance in developing health education materials and programs.

AVAILABILITY OF MATERIALS

A large film library is maintained; pamphlets, booklets, reports, posters and other audio-visual aids are available. The Health Education Section acts as a central clearinghouse and referral center for professional and lay informational materials.



None

COST

None

INFORMATION SOURCE

Colorado Department of Health 4210 East 11th Avenue Denver, Colorado 80220



NAME OF AGENCY

Staff Environmental Division, Colorado Division of Highways

PURPOSE/FUNCTIONS

Responsible for assuring full consideration of environmental, social and economic effects of highway projects in all phases of development.

SERVICES AVAILABLE

GRADE LEVEL

9-12; higher education

HOW OBTAINED

Contact the Staff Environmental Manager, Room 309, Colorado Division of Highways, 4201 East Arkansas, Denver, Colorado 80222 (757-9448 or 757-9449).

WHO IS INVOLVED

The Staff Environmental Manager, his assistant, and a staff of 14 offering expertise in varied disciplines.

DESCRIPTION OF SERVICES

Written general or specific information about environmental, social and economic assessments usually considered in the planning and design of highway projects. Disciplines include agronomy, biology, chemistry, enginedring, geography, history, human relations, economics, hydrology, politics, meteorology, landscape architecture and public information, urban and rural land use planning, air quality analysis, water quality analysis, and noise assessment.

AVAILABILITY OF MATERIALS

Publications available for schools include The Colorado Action Plan, delineating both policy and procedures; various environmental impact statements for specific projects; guideline documents for erosion control.



Draft impact statements are issued upon request to interested agencies, organizations and individuals. Subsequent final impact statements are sent to respondents who request a copy while offering written substantive comments on the draft.

COST

None

INFORMATION SOURCE

Staff Information Officer Environmental Division Colorado Division of Highways



177

NAME OF AGENCY

Colorado Division of Parks and Outdoor Recreation

PURPOSE/FUNCTIONS OF AGENCY

Provide system of state parks and state recreation areas Prepare state recreation plan Administer land and water conservation funds Administer statewide boat licensing and boat safety

TITLE OF SERVICES AVAILABLE

State parks and state recreation areas provide interpretive services through resident staff; campsites and nature trails are maintained at several parks; various recreational publications, including boat and water safety information, are available.

GRADE LEVEL

K-12 Colleges and Adult

HOW OBTAINED

Contact state park or recreation area staff listed below.

State Park or		
Recreation Area	Location	<u>Tclephone</u>
•		
Antero	4 miles N. E.	Lake George
	Antero Junction	<u> 748-3401</u>
		Denver
Arapahoe	7 miles E. of Denver	755-0766
	7 miles E. of	Ft. Collins
Barbour Ponds	Longmont	482-8266
	18 miles N. E.	Denver
Barr Lake State Park	Denver	892-3437
	22 miles N.	Idalia
Bonny	Burlington	<u>354-7306</u>
	7 miles S.	Ft. Collins
Boyd	Ft. Collins	482-8266
	3 miles S.W.	Denver
Castlewood	Franktown	755 <u>-0766</u>
	8 miles S. W.	Denver
Chatfield	Denver	798-4282
	Adjacent to Denver	Denver
Cherry Creek (2)(3)(4)	city limits S. E.	755 <u>-</u> 0766
	1 mile S. of	Crawford
Crawford	Crawford	921-5721

HOW OBTAINED

State Park or	141	Tolonhooo
Recreation Area	Location	Telephone Lake George
	8 miles W.	748-3401
Eleven-Mile	Lake George	
Golden Gate Canyon	18 miles A. W.	Central City
State Park	Golden -7 miles	582-5427
	N. Blackhawk on	
	Highway 119	
	12 miles S.	Kremmling
Green Mountain	<u>Krommling</u>	724-3756
	6 miles N.	Fruita
Highline	Loma	<u>858-7208</u>
Lory State Park	5 miles W.	Ft. Collins
(Horsetooth)	Ft. Collins	492-1623
	15 miles E.	Palisade
Island Acres	Grand Junction	454-7297
	22 miles N. E.	Goodrich
Jackson	Ft. Morgan	625-2405
	3 miles W	Walsenburg
Lathrop State Park (1)	Walsenburg	738-2376
	17 miles Š.	Norwood
Miramonte	Norwood	837-4664
	South of Arboles	Allison
Navajo (3)	1 mile	883-2208
	16 miles N. E.	Crawford
<u>Paonia</u>	Paonia	921-5721
	6 miles W.	Co arado Spring
Pueblo	Pueblo	473-2945
	3 miles W.	Ramah
Rama h	Rama h	745-2500
	10 miles N.	Rifle
Rifle Gap-Falls (1)	Rifle	625-1607
Millo dap / dilb (1)	21 miles S. E.	Ft. Collins
State Forest*	Walden	482-8266
Steamboat Lake State Park	25 miles N.	C!ark
Pearl L.	Steamboat Springs	637-2233
1 441 7 147	2 miles S.	Delta
Sweitzer Lake	Delta	874-4258
	15 miles S. E.	Jefferson
Tarryall Veya	Jefferson	836-2521
	12 miles E.	Collbran
	Collbran	487-3201
1030		•

WHO IS INVULVED

DESCRIPTION
OF
SERVICES

Park Rangers and staff of each park and recreational area

On site presentations and trip leader services are not formalized and "presentations" can be developed for a variety of park and recreation subjects on request.

Boat safety instruction is available on request in Denver area.

Films on boat safety are available for loan from the Denver office.



DESCRIPTION
OF SERVICES
(continued)

School field trips in park and recreation areas under teacher supervision are welcome. A Trip Leader (interpreter/manager) may be available if requested in advance of the field trip.

AVAILABILITY OF MATERIALS

Materials and services availability will vary from one park and recreation area to another, depending upon staff size, duty requirements and facility function and characteristics.

SPECIAL REQUIRE-MENTS

Advanced arrangements with area staff is necessary

COST

Contact State Farks and Recreation staff for school field trips.

The cost of the annual Colorado Parks pass, good only during the calendar year of issue, is \$5.00 and is not transferable for public visitors.

INFORMATION SOURCE

Colorado Division of Parks and Outdoor Recreation (Denver office)  $\,$ 



NAME OF AGENCY

Colorado Geological Survey

PURPOSE/FUNCTIONS

The Survey distributes geologic information, provides advice and counsel to state and local governmental agencies, inventories and promotes the development and conservation of mineral resources, and determines areas of geologic hazard.

SEF ICES AVAILABLE

**Publications** 

GRADE LEVEL

6-12, university

HOW OBTAINED

Contact the Survey Office

WHO IS INVOLVED

Colorado Geological Survey staff

PESCRIPTION OF SERVICES

Num rous publications are available, including A Layman's Guide so the Geology of Colorado, Bulletin 32 and Guidelines for Geologic Hazard and Mineral Resource Areas.

AVAILABILITY OF MATERIALS

A publication and price list is available upon request. Publications can be bought by mail.

169



None

COST

Price list available upon request. Quantity discounts are given to educational institutions.

INFORMATION SOURCE

Colorado Geological Survey 1845 Sherman Street, Room 254 Denver, Colorado 80203



·	
NAME OF AGENCY	Colorado State Forest Service
PURPOSE/FUNCTIONS	To provide technical assistance and information in the area of forest management.
SERVICES AVAILABLE	Printed information, slide-tape presentations, speakers
GRADE LEVEL	1-12
HOW OBTAINED	Write to the Colorado State Forest Service, which is headquartered on the Main Campus, Colorado State University, Fort Collins, Colorado 80523
WHO IS INVOLVED	All Forest Service personnel
DESCRIPTION OF SERV 13	The Colorado Forest Service provides technical on-the-ground assistance in all phases of forest management and protection on state and private lands in Colorado. Forestry-related information is available to all requestors.
AVAILABILITY OF MATERIALS	Printed brochures are available.



None

COST

Most materials are free; contact the Forest Service concerning fees for speakers.

INFORMATION SOURCE

Colorado State Forest Service Colorado State University Fort Collins, Colorado 80525



NAME OF AGENCY

Colorado State Litrary Reference and Research Services

SERVICES AVAILABLE

Reference and research

GRADE LEVEL

N/A

HOW OBTAINED

By loan to all state government agencies, and by inter-library loan or special arrangements to other governmental units.

WHO IS INVOLVED

Professional library reference staff

DESCRIPTION OF SERVICES

Federal Documents Depository; Colorado State Documents and Colorado Regional Documents Collections; indexes, abstracts, and reference books; periodicals, technical reports and books on areas of interest to state employees. Special services offered include operation of the Interstate Energy Conservation Leaders in Clearinghouse for the Colorado Department of Education and access to 30 sutomated subject data bases available on line in the State Library for reference searches.

AVAILABILITY OF MATERIALS

Most materials available on inter-library loan through appropriate library units.



Services available primarily to state government employees.

COST

No charge to use the Library facilities. Automated subject data base searches are offered or a cost-recovery basis. Agencies using the service are charged only for on-line time and off-line print-outs. Additional cost, if any, is determined on the basis of the search service requested.

5

INFORMATION SOURCE

Reference Service Colorado State Library 1362 Lincoln Street Denver, Colorado 80203 (892-2171 or 2177)



NAME OF AGENCY

Colorado State University Co-operative Extension Service

PURPOSE/FUNCTIONS

Dissemination of information on agriculture, marketing and natural resources, community and resource development, family living, and youth.

SERVICES AVAILABLE

Development and implementation of informal educational opportunities dealing with environmental enhancement and the conservation and wise use of natural resources.

GRADE LEVEL

All grades

HOW OBTAINED

Contact the Co-operative Extension Service Office or local County Extension Office (consultant telephone directory under Co. ty Government)

WHO IS INVOLVED

45 specialist are based on the CSU campus; 57 County offices serve 59 of folorado's 63 counties.

DESCRIPTION OF SEFVICES

Individual and/or panel lectures and presentations; slide-tape present tions video-cassette tape materials, films, bulletins, manuals, pamphlets

AVAILABILITY OF MATERIALS

The Natural Resource Newsletter is available upon request (contact Robert Hyde at the CSU Office). Other information available upon request.



none

COST

Fees are charged for some bulletins, film rentals and shipping.

INFORMATION SOURCE

Mr. Carl W. Andrews, Assistant Director Agriculutral Development Extension Service Colorado State University Fort Collins, Colorado 80521



NAME OF AGENCY

Denver Museum of Natural History

PURPOSE/FUNCTIONS

To collect, preserve, research and interpret objects pertaining to the fields of anthropology, astronomy, earth sciences and life sciences. Interpretation includes construction of exhibits and development of educational programs and materials.

SERVICES AVAILABLE

Guided tours, "touch cart" program (May only), workshops, classes, student intern and volunteer training programs, educational trips, films, earphone tours, planetarium programs, pre-tour information packets.

GRADE LEVEL

Pre-school - adult

HOW OBTAINED

Contact Education Department, Museum of Natural History, City Park, Denver, Colorado 80205 399-0870

WHO IS INVOLVED

Staff and volunteers of various museum departments

DESCRIPTION OF SERVICES

The programs and materials mentioned above are offered in life sciences, earth sciences, anthropology and astronomy. Films are available on a loan basis.

AVAILABILITY OF MATERIALS

A detailed brochure describing survices is available from the Education Department.



176

Reservations for programs and materials must be made in advance. It is advisable to schedule guided tours at least a month in advance (two months in advance in the spring).

COST

Nominal charges for some services and programs.

INFORMATION SOURCE

Ms. Marty Hartmann, Curator of Education Denver Museum of Natural History



NAME OF AGENCY

Denver Water Department

PURPOSE/FUNCTIONS

The Department promotes water conservation. The Department Water Quality Laboratories and Treatment Plants monitor water quality.

SERVICES AVAILABLE

Audio-visual presentations, printed materials, litterbags

GRADE LEVEL

1-12

HOW OBTAINED

Contact the Office of Pablic Affairs, Denver Water Department for all materials, except the "Beauregard Beaver" slide presentation, which can be obtained from Keep Colorado Beautiful.

WHO IS INVOLVED

Water Department Laboratory personnel conduct plant tours

DESCRIPTION OF SERVICES

"Beauregard Beaver", a 13-minute slide show with narration on water conservation, is available through Keep Colorado Beautiful. The Water Department can provide films and printed materials on water conservation, including "Water Follies: A Soak Opera" and "Be Water Wise". Plastic car litterbags are also available. The Water Department offers class tours through a water quality laboratory and treatment plant, demonstrating methods used and types of water-quality investigations carried out to ensure the highest-quality water supply possible.

AVAILABILITY OF MATERIALS

Upon request



None

COST

Usually none

INFORMATION SOURCE

Office of Public Affairs Denver Water Department 222-5511, extension 371



NAME OF AGENCY

Environmental Protection Agency, Region VIII

PURPOSE/FUNCTIONS

Standard-setting, environmental monitoring, program development, grant assistance, enforcement. Pollution concerns include water, air, pesticides, noise, radiation, and solid waste.

SERVICES AVAILABLE

Educational support materials

GRADE LEVEL

1-12 and higher education

HOW OBTAINED

By request; the Agency also does standard mailings to school districts, state departments of education, and individual schools.

WHO IS INVOLVED

Office of Public Affairs

DESCRIPTION OF SERVICES

Slide-tape programs, filmstrips, printed brochures, posters, and activities, such as coloring books, are available.

AVAILABILITY OF MATERIALS

On request as supply lasts



None

COST

None

INFORMATION SOURCE

Howard W. Kayner
Director of Public Affairs
Environmental Protection Agency, Region VIII
1860 Lincoln Street
Denver, Colorado 80202



NAME OF AGENCY

Fish and Wildlife Service

PURPOSE/FUNCTIONS

To conserve the nation's wild birds, mammals and fish for the enjoyment of all people.

SERVICES AVAILABLE

Audio-visual materials, printed materials, speakers

GRADE LEVEL

K-12

HOW OBTAINED

For films, contact Audio-Visual Services, Utah State University, Logan, Utah 84322; for other services, contact the Regional Office in Denver (see "Information Source").

WHO IS INVOLVED

Public Affairs Office

DESCRIPTION OF SERVICES

About 30 films may be scheduled. Booklets, pamphlets and other informational materials on endangered species and other birds, mammals and fish are available.

AVAILABILITY OF MATERIALS

Upon request



132

None

COST

INFORMATION SOURCE

No cost for literature; films borrowed require the payment of the return postage.

Mrs. Violette Solt Public Affairs Office Fish and Wildlife Service P.O. Box 25486, DFC Denyer, Colorado 80225



NAME OF AGENCY

Forest Service, US Department of Agriculture

PURPOSE/FUNCTIONS

Resource management of lands contained within the National Forest System; co-operative state and private forestry; forestry research.

SERVICES AVAILABLE

Workshops and resource persons

GRADE LEVEL

Not applicable

HOW OBTAINED

Contact the Rocky Mountain Region Office (see "Information Source")

WHO IS INVOLVED

Teachers, Government employees, representatives of industry and labor.

DESCRIPTION OF SERVICES

A 32 to 40 contact-hour workshop designed to acquaint teachers and resource people with the latest process and problem-solving techniques for involving others in the study of environmental habitats, soils in land use planning, forest environments, water quality criteria and urban environmental systems.

AVAILABILITY OF MATERIALS

The Forest Service provides each workshop participant with a handbook, Environmental Education for Teachers and Resource People, which contains lesson plan outlines, activity ideas, simulations, and a guide to developing individual environmental investigations. These materials are available only through the workshop.



At least three months of pre-planning with the Forest Service.

CUC.

INFORMATION

Minimal; contact the Rocky Mountain Region Office for details.

Gary J. Severson, Environmental Education Officer Forest Service, USDA Rocky Mountain Region P.O. Box 25127 11177 West 8th Avenue Denver, Colorado 80225



NAME OF AGENCY

INTERSTATE ENERGY CONSERVATION LEADERSHIP PROJECT (IECL)

SERVICES AVAILABLE

GRADE LEVEL

K-12

HOW OBTAINED

Write to ENERGY, Colorado Department of Education, 201 E. Colfax Ave. Denver, Colorado 80203 or to the IECL Clearinghouse, Colorado State Library, 1362 Lincoln St., Denver, Colo. 80203

WHO IS INVOLVED

Directly involved in the project are the Federal Energy Administration, the U.S. Office of Education, the States of Colorado, Washington, Massachusetts, Iowa, and North Carolina. Indirect involvement from all U.S. state departments of education.

DESCRIPTION OF SERVICES

The IECL project conducts national conferences to train state education leaders in the latest energy conservation techniques that they can use in training local school district personnel. Workshops are conducted by an IECL Master Training Team in the areas of school curriculum, finance, transportation, and facilities. The IECL, through the Colorado State Library operates an energy conservation Clearinghouse for educators. The purpose of the Clearinghouse is to research, collect, and disseminate energy conservation information to interested school personnel.

AVAILABILITY OF MATERIALS

A number of energy conservation materials are provided to educators through the CDE Supporting Services Unit and the IECL Clearinghouse.



None, execpt that requests for information and materials should come from persons directly or indirectly involved in the educational community.

COST

No charge for materials and information.

INFORMATION SOURCE

Calvin E. Anderson, Director, Supporting Services Unit, Colorado Department of Education, 201 East Colfax Ave.; Denver, Colo. 80203



NAME OF AGENCY

National Center for Atmospheric Research (NCAR)

PURPOSE/FUNCTIONS

To conduct research in atmospheric sciences. Serves as a center for planning large-scale field programs and holding national and international scientific conferences.

SERVICES AVAILABLE

Field trips, film rental

GRADÉ LEVEL

6-12; higher education

HOW OBTAINED

Tours may be scheduled by telephoning the Information Office at 494-5151, extension 260. Information on publications and teaching aids and lists of rental films may be obtained by contacting the Information Office.

WHO IS INVOLVED

National Science Foundation sponsors this non-profit institution; it is operated by the University Corporation for Atmospheric Research, a consortium of more than forty universities with graduate programs in the atmospheric sciences or related fields.

DESCRIPTION OF SERVICES

Schools may schedule class field trips to the Mesa Laboratory of NCAR. The tour usually begins with a slide presentation and question-and-answer period, followed by a guided walk through exhibits, the library and the computer room. A film, The Atmosphere in Motion, may be shown if requested. Printed teaching aids and films are available from NCAR.

AVAILABILITY OF MATERIALS

Printed teaching aids available at no cost include brief descriptions of NCAR's work, the applications of computers to problems in atmospheric sciences, charts of conventional weather map symbols, simple air pollution experiment techniques, and general background information. NCAR has also prepared a booklet, The Natural Features of the NCAR Site, which can serve as a quide to the geology, botany and zoology of the foothills region.



Class tours should be scheduled as far in advance as possible. A maximum of 45 students can be conducted on one tour; between 20 and 40 students is desirable.

COST

The Natural Features of the NCAR Site is available at 30¢ per copy. A listing of rental films and prices is available from the Information Office. Other printed teaching aids are available at no charge.

INFORMATION SOURCE

Information Office NCAR Boulder, Colorado



NAME OF AGENCY

National Oceanic and Atmospheric Administration, US Department of Commerce

PURPOSE/FUNCTIONS

Conducts research and serves as national focus for civil programs in the oceans, marine life, the atmosphere, near space and the sun-earth system.

SERVICES AVAILABLE

Brochures, documents, annual science fair

GRADE LEVEL

All ages

HOW OBTAINED

Single copies of brochures can be obtained from the NOAA Public Affairs Office.

WHO IS INVOLVED

The NOAA includes the National Weather Service, National Marine Fisheries Service, National Ocean Survey, Environmental Data Service, Office of Coastal Zone Management, National Environmental Satellite Service, Sea Grant, and the Environmental Research Laboratories (a national system of a dozen laboratories).

DESCRIPTION OF SERVICES

The Public Affairs Office of NOAA stages a science fair, usually every October, coinciding with NOAA's anniversary, providing a forum for students and other visitors to see some of the hardward and techniques used in NOAA's work.

Brochures are designed to inform readers of all ages.

AVAILABILITY OF MATERIALS

Single copies of brochures are available upon request at no charge; large orders must be purchased from the Superintendent of Documents, US GPO.

A variety of research and service reports and projects are available, such as National Ocean Survey charts.



None

COST

None, except for large orders of information brochures

INFORMATION SOURCE

Office of Public Affairs NOAA Boulder, Colorado 80302 499-1000, extension 6286



NAME OF AGENCY

National Park Service

PURPOSE/FUNCTIONS

To conserve the nation's outstanding scenic and historic areas; to make these areas available for public enjoyment in ways that will keep them unspoiled for future generations.

SERVICES AVAILABLE

Field-study areas, manuals, classroom presentations, films

GRADE LEVEL

4-12

HOW OBTAINED

Contact the Rocky Mountain Regional Office (see "Information Source").

WHO IS INVOLVED

National Park Service staff

DESCRIPTION OF SERVICES

Areas in natural, historical or recreational parks which exemplify man's impact on nature (and vice-versa), called National Environmental Study Areas (NESA), are available for class field trips. The manuals contain general information about the NESA which will aid the teacher in planning the field trip. Speakers are available for classroom presentations. The Service will lend environmental education films at no charge for one week for showing to school classes.

AVAILABILITY OF MATERIALS

Films should be reserved at least one month in advance.



None

COST

None

INFORMATION SOURCE

William L. Featherstone
Environmental Education Co-ordinator
National Park Service - Bucky Mountain Regional Office
Box 25287
Denver, Colorado 80225
234-3111



NAME OF AGENCY

Reclamation Section
Office of the Executive Director
Department of Natural Resources

PURPOSE/FUNCTIONS

The Section advises the Land Reclamation Board, the Bureau of Mines, and the Commissioner of Mines on the administration of reclamation laws. It also monitors reclamation of lands subject to the laws.

SERVICES AVAILABLE

Speakers

GRADE LEVEL

4-12, university

HOW OBTAINED

Write to the Chief of the Reclamation Section

WHO IS INVOLVED

A section staff member with previous teaching experience is available to give presentations.

DESCRIPTION OF SERVICES

Lectures on the goal of land reclamation are available as scheduling permits. A slide presentation is in preparation and should be completed in 1976.

AVAILABILITY OF MATERIALS

Limited

.....

\*\* 1::*\** 



None

COST

Expenses for long-distance speaking trips

INFORMATION SOURCE

Reclamation Section Department of Natural Resources 1845 Sherman Street Denver, Colorado 80203



NAME OF AGENCY

San Juan BOCS

PURPOSE/FUNCTIONS

To provide supplementary educational services and consultation to member school districts.

SERVICES AVAILABLE

Raft trips

GRADE LEVEL

7-12

HOW OBTAINED

Contact R.W. (Bill) Brown, Director San Juan BOCS Fort Lewis College Durango, Colorado 81301 (247-3261)

WHO IS INVOLVED

Raft trips can be organized for students or for instructional staff. Experienced river pilots lead the expeditions.

DESCRIPTION OF SERVICES

The BOCS offers a limited number of raft adventures for schools on several rivers, including the Dolores, the San Juan, the Animas, Westwater Canyon and Desolation Canyon. Included are all food, safety equipment and basic gear. The trips last from one to five days and provide an opportunity for viewing Indian ruins, practicing geology, botany, zoology and ecology, and integrating these sciences with food preparation, social development, wilderness survival, conservation, lifetime sports, and basic skills.

AVAILABILITY OF MATERIALS

None



A minimum of 10 passengers is required to organize a topip. Schools must provide at least one supervisory staff member per 10 students and transportation to and from the river. The students supply sleeping bags, clothing and beverages. School staff and students assist with rigging and de-rigging, camp preparation, cooking and camp cleaning.

COST

The cost varies from \$15 to \$25 per student per day.

INFORMATION SOURCE

San Juan BOCS

NAME OF AGENCY

Soil Conservation Service

PURPOSE/FUNCTIONS

Gives technical assistance to individuals, groups, organizations, cities and towns, county and state governments in conserving soil and water resources.

SERVICES AVAILABLE

Consultants, audio-visual materials, written materials, workshops, field trips

GRADE LEVEL

K-12

HOW OBTAINED

Contact the Soil Consersation Service (see "Information Source").

WHO IS INVOLVED

District conservationists, soil scientists, range conservationists

DESCRIPTION OF SERVICES

Service staff can give assistance in planning and developing outdoor classrooms, conduct workshops for teachers, and conduct class field tours. Slide presentations are also available.

AVAILABILITY OF MATERIALS

Publications and slide presentations are available upon request. Workshops and field trips should be arranged as much in advance as possible.



1,5

None

COS'

INFORMATION

None

Soil Conservation Service State Conservationist Office 2490 West 26th Avenue Denver, Colorado

Administrative staff: 837-3947



INSTITUTION

Colorado State University

COLLEGE OR DEPARTMENT

College of Forestry and Natural Resources

COURSES

The College is divided into five departments, offering degrees in eleven majors:

Department of Earth Resources - Geology; Watershed Sciences

Department of Fishery and Wildlife Biology - Fishery Biology; Wildlife Biology

Department of Forest and Wood Sciences - Forest Biology; Forest Management Science; Natural Resources Management; Wood Science and Technology

Department of Range Science - Range Ecology; Range-Forest Management Department of Recreation Resources - Outdoor Recreation

SPECIAL PROGRAMS OR SERVICES

Colorado State University is Colorado's land-grant institution and offers active research programs, which provide employment and experience to many undergraduate and graduate students. The College of Forestry and Natural Resources maintains close co-operation with a variety of local, state and federal forestry and natural resource agencies, including guest lectures, special seminars, and student employment.

RESOURCE PEOPLE

All university and university extension faculty may be considered resource people.



#### AVAILABILITY OF MATERIALS

Printed materials and films are available for borrowing.

COST

Costs vary and may be obtained from the CSU Bulletin Room and the Film Library.

INFORMATION SOURCE

Dr. John L. Schmidt, Assistant Dean College of Forestry and Natural Resources Colorado State University Fort Collins, Colorado 80521



INSTITUTION

Colorado State University

COLLEGE OR DEPARTMENT

Co-operative Extension Service

COURSES

No formal courses

SPECIAL PROGRAMS OR SERVICES

The Service helps educators develop and implement informal educational opportunities dealing with environmental enhancement and the conservation and wise use of natural resources. A staff of 45 specialists, based on the CSU campus and in 57 county offices throughout the state, is available to give individual and/or panel lectures and presentation, slide-tape presentations, and video-cassette tape materials. Films and printed materials are also available.

RESOURCE PEOPLE

Contact the Co-operative Extension Service for information.



#### AVAILABILITY OF MATERIALS

Printed and audio-visual materials on agriculture, marketing and natural resources, community and resource development, family living and youth are generally available upon request.

COST

Film rentals, shipping, and certain printed bulletins; other materials and services provided at no cost.

INFORMATION SOURCE

Mr. Carl W. Herzman, Assistant Director Agricultural Development Extension Service Colorado State University Fort Collins, Colorado 80521





INSTITUTION

Colorado State University

COLLEGE OR DEPARTMENT

Department of Fishery and Wildlife Biology

SERVICES AVAILABLE

Extension Wildlife Specialists; student speakers

DESCRIPTION OF SERVICES

Students of the CSU Wildlife Society are available for slide-show presentations on wildlife and ecology. The Specialists are available as speakers as scheduling permits; local environmental education workshops can be arranged.

The Department of Fishery and Wildlife Biology also offers extension classes in wildlife management.

SPECIAL PROGRAMS OR SERVICES

HOW OBTAINED

Requests should be directed to the local county or area CSU Extension Service Office.

**RESOURCE PEOPLE** 

Extension Wildlife Specialists



#### AVAILABILITY OF MATERIALS

Audio-visual materials on wildlife subjects may be borrowed; environmental education activity booklets are also available.

#### COST

Most materials are available at no cost; a small charge is assessed for some. Wildlife Society student speakers' expenses must be paid by the requesting organization.

#### INFORMATION SOURCE

Extension Wildlife Specialist Colorado State University Extension Service Fort Collins, Colorado 80523



#### INSTITUTION

University of Northern Colorado

COLLEGE OR DEPARTMENT

Department of Educational Media College of Education

COURSES

Outdoor Education 350 - Education for Leisure through Outdoor Education

451 - Programs in Outdoor Education

508 - Workshop in Outdoor Education (details given below)\*

550 - Internship in Outdoor Education

655 - Philosophy and Principles

651 - Organization and Administration

652 - Research Seminar

Fine Arts Journalism 361 - Art and Environment 496 - Opinion Formation 315 - Music in Recreation

Music Biology

501 - Environmental Conservation
565 - Social and Cultural Differences

EDF

CO1 Breations

601 - Practicum

ID

701 - Doctoral Dissertation

SPECIAL PROGRAMS
R SERVICES

K-12 UNC Lab School Outdoor Education Program
Greeley Public Schools Outdoor Education Program for the Educable
Mentally Handicapped for the primary, intermediate, pre-vocation
and vocational classes

Center for Outreach and Non-Traditional Education - UNC classes:

Off-campus courses in Colorado Off-campus courses offered in co-operation with the National Outdoor Leadership School, Lander, Wyoming (courses offered in Wyoming, Africa, Alaska, and Mexico)

Courses are offered through allied educational agencies:

Wilderness Institute for Survival Education, Denver Colorado School of Outdoor Living, Inc., Denver Rocky Mountain Center for Experiential Learning, Denver

RESOURCE PEOPLE

State and Federal Government personnel participate in off-campus classes. Personnel from allied educational agencies offer off-campus classes.

\*Outdoor Education 508 Workshops:

Outdoor Education

Survival Education
Beginning River Canoeing and

Environmental Interpretation
Outdoor Experiential Education

Ski Touring and Winter Camping Seminar Practicum in Outdoor Leadership Skills

Environmental Education

#### AVAILABILITY OF MATERIALS

A Resource Bank of Curriculum Materials is available in the Media Planning and Production Center in McKee Hall 101, University of Northern Colorado campus, Greeley. Numerous textbooks are available in the reserve section of the Michener Library, UNC.

COST

Contact the University of Northern Colorado

INFORMATION SOURCE

Dr. Vincent A. Cyphers, Professor Co-ordinator, Outdoor Education Program University of Northern Colorado Greeley, Colorado 80639



#### INSTITUTIONS OF HIGHER EDUCATION

The following institutions offer courses or degree programs in environmental conservation and related areas.

Aims Community College Department of Social Sciences P.O. Box 69 Greeley, Colorado 80631

Adams State College
Division of Scientific and
Technological Studies
Department of Environmental Science
Alamosa, Colorado 81102

Arapahoe Community College Science and Math Division 5900 South Santa Fe Drive Littleton, Colorado 80120

Colorado College Biology, Chemistry, Physics, Economics Colorado Springs, Colorado

Colorado Mountain College - East Campus Associate in Applied Science, Environmental Protection Technology Program Leadville, Colorado 80461

Colorado Mountain College - West Campus Environmental Education Summer Workshop (US Forest Service) Glenwood Springs, Colorado 81601

Colorado School of Mines Golden, Colorado 80401

Colorado Women's College Biology, Chemistry, Philosophy. Art, Sociology and Political Science Departments

El Paso Community College Mathematics and Science Department 2200 Bott Avenue Colorado Springs, Colorado 80904

Fort Lewis College Chemistry, Biology, Geology Departments Durango, Colorado 81301

Mesa College Biological Sciences 1120 North Avenue Grand Junction, Colorado 81501 Metropolitan State College Department of Biology 250 west 14th Street Denver, Colorado 80204

Regis College Environmental Studies and Human Ecology Program (interdisciplinary) West 50th and Lowell Boulevard Denver, Colorado 80212

Wright-Ingraham Institute Field Workshops in Integrative Studies 1228 Terrace Road Colorado Springs, Colorado 80904

Colorado State University School of Forestry Fort Collins, Colorado 80521

University of Colorado, Boulder B.A. program in Environmental Conservation c/o Geography Department Guggenheim 110 Boulder, Colorado 80302

University of Colorado, Colorado Springs College of Engineering Colorado Springs, Colorado 80907

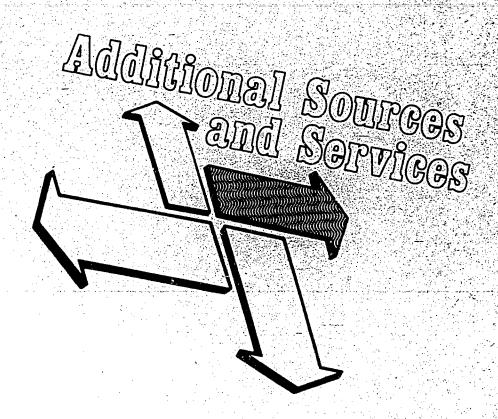
University of Denver Graduate School of International Relations Benver, Colorado 80210

University of Northern Colorado Departments of Science Education, Biological Science, Earth Science, and Outdoor Recreation Greeley, Colorado 80639

University of Southern Colorado Department of Biology Pueblo, Colorado 81001

United States Air Force Academy Environmental Engineering Branch Department of Civil Engineering USAF Academy, Colorado 80840





#### APPENDIX

The American Camping Association offers workshops on camping activities, leadership, crafts, and ecological studies (annually). Contact Nancy Swank, 1788 Geneva, Aurora, Colorado 80010 (366-8224). For information on publications, films and filmstrips, contact Publication Service, American Camping Association, Bradford Woods, Martinsville, Indiana 46151.

The American Canoe Association can provide educational materials on canoe safety, canoeingsource information, and sources of equipment. Contact Joan Mason, Executive Secretary, 4260 East Evans Avenue, Denver, Colorado 80222 (733-4511).

The American Humane Association offers several publications on animal protection to schools. For a list of titles and prices contact the National Headquarters of the Association at P.O. Box 1266, Denver, Colorado 80201.

The Camp Fire Girls sponsor many conservation programs, including river clean-up and tree planting. Contact Camp Fire Girls, Inc., 2901 West 19th Avenue, Denver, Colorado.

The Colorado Co-operative Wildlife Research Unit trains graduate students at CSU in wildliferelated subjects. Speakers are available for brief talks and slide presentations. Contact Dr. Kenneth Russell, Leader, Co-operative Research Unit, 103 Coops Unit Building, Colorado State University, Fort Collins, Colorado 80523.

Ducks Unlimited is a non-profit membership corporation organized to perpetuate wild ducks and other wild fowl in North America through the conservation, restoration and management of their habitats. Films on the subject may be borrowed for only the return postage; printed materials are available. Contact Ducks Unlimited, Inc., P.O. Box 66300, Chicago, Illinois 60666.

The Environmental Defense Fund's work centers on legal and scientific action on environmental issues, particularly energy development. It is a non-profit public interest corporation. Graduate internships can be arranged in the sciences, economics and law. Contact the Rocky Mountain/Great Plains Office, 1651 Pennsylvania Street, Denver, Colorado 80203.

The Fish and Wildlife Reference Service is a computerized information retrieval system operated by the Denver Public Library and the US Fish and Wildlife Service. Contact the Fish and Wildlife Reference Service, Denver Public Library Service Building, 2100 West Mississippi Avenue, Denver, Colorado 80223 (922-0505).

The Highland Survival School offers survival education and primitive living techniques patterned after the curriculum offered at Brigham Young University. A prime objective is the promotion of teacher instruction in teaching survival techniques in outdoor education. Instructional films and survival literature are available at nominal cost. Contact Richard L. Jamison, Highland Survival School, P.O. Box 4754, Colorado Springs, Colorado 80910 (392-2216).

The Hunter Safety Section of the Division of Wildlife offers hunter safety courses to students beginning in grade 6. All necessary materials are furnished at no cost. Contact:

Division of Wildlife 6060 Broadway Denver, Colorado 80216

825-1192

Southwest Regional Office P.O. Box 788 Montrose, Colorado 81401 249-3431

Northwest Regional Office P.O. Box 1687 Grand Junction, Colorado 81501 243-3395

Southeast Regional Office P.O. Box 7148 Colorado Springs, Colorado 80933 473-2945

Northeast Regional Office Research Center P.O. Box 2287 Fort Collins, Colorado 484 - 2836 80522



209

The Future Farmers of America provides assistance in planning, developing and implementing range judging and plant identification contests for interested groups, including teacher workshops to enable teachers to coach students in preparation for the contests. Contact the Akron Field Office, P.O. Box M, Akron, Colorado 80721 (345-2314).

The Colorado Division of the Izaak Walton League of America - contact Ms. Edna Hill, IWLA Conservation Education Chairman, Colorado Division, 5803 South Fox Way, Littleton, Colorado 80120.

The Metropolitan Wildlife Association can provide speakers and information on conservation and restoration of water, wildlife, forests and fields and pollution control. Contact Nick Zeylmaker, Secretary-Treasurer, Metropolitan Wildlife Association, 2215 Eliot Street, Denver, Colorado 80211 (477-5489).

The National Hiking and Ski Touring Association is a non-profic corporation devoted to the research, planning and rebuilding of American trails. Contact NAHSTA - Outdoor School at Vail, P.O. Box 7421, Colorado Springs, Colorado 80933 for information.

Orienteering Service, U.S.A. provides information and instructional materials for orienteering. For a free catalogue and pamphlet, write the Service at P.O. Box 7394, Colorado Springs, Colorado 80933.

Your Pet's World, an animal welfare column by Edna Travinek, is published in each Saturday edition of the Rocky Mountain News, 400 West Colfax Avenue, Denver, Colorado.

The Sierra Club, Rocky Mountain Chapter, offers an outings program, speakers bureau, films and monthly programs on environmental topics. The book store offers printed materials. Contact the Sierra Club at 1325 Delaware, Denver, Colorado 80204 (572-3202).

Trout Unlimited is a non-profit organization formed to preserve clear water and perpetuate high-quality fishing. Films and literature are available to schools. Contact Trout Unlimited, 4260 East Evans Avenue, Denver, Colorado 80222 (757-7144).

The Western States Water Council co-ordinates interstate water rights and water resource matters. For its newsletter and various reports, contact the Council at Suite 200-Chancellor Building, 220 South Second East, Salt Lake City, Utah 84111.

Wright-McLaughlin Engineers is a consulting engineering firm in water resources planning, sewage treatment, hydrology and other water-related projects. Information is available from their office at 2420 Alcott Street, Denver, Colorado 80211 (458-6201).

The Colorado Department of Agriculture can arrange educational assistance to schools, depending upon availability of personnel. Contact the Department at 406 State Services Building, 1525 Sherman Street, Denver, Colorado 80203

Colorado State Patrol patrolmen and staff have an active school education program. Contact Lieutenant William E. Stoker, Education and Safety Section, Colorado State Patrol, 4201 East Arkansas Avenue, Denver, Colorado 80222

The National Outdoor Leadership School is a private, non-profit institution offering small co-educational expeditions isolated from civilization for up to five weeks. For further information write the School at Box AA, Lander, Wyoming 82520 (307-332-4381 or 4589).

Denver's Mountain Park System encompasses some of the most scenic areas of the Colorado Rockies. For use of the parks for educational purposes, contact Jim Dixon, Superintendent, Denver Mountain Parks, City Park, 23rd and York Streets, Denver, Colorado 80205



210